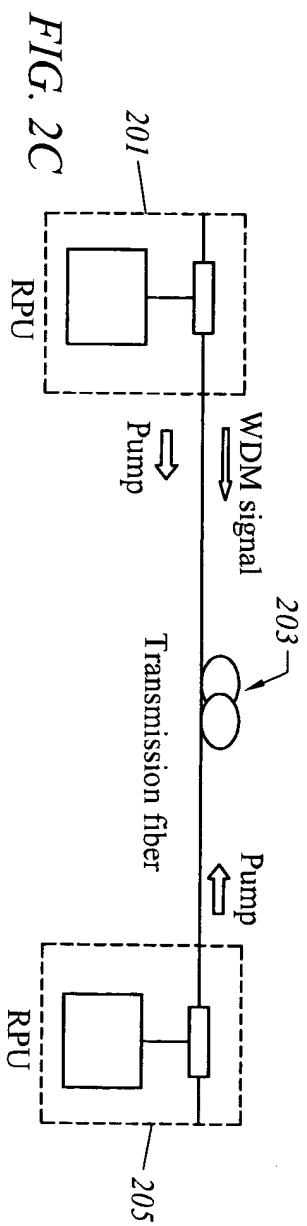
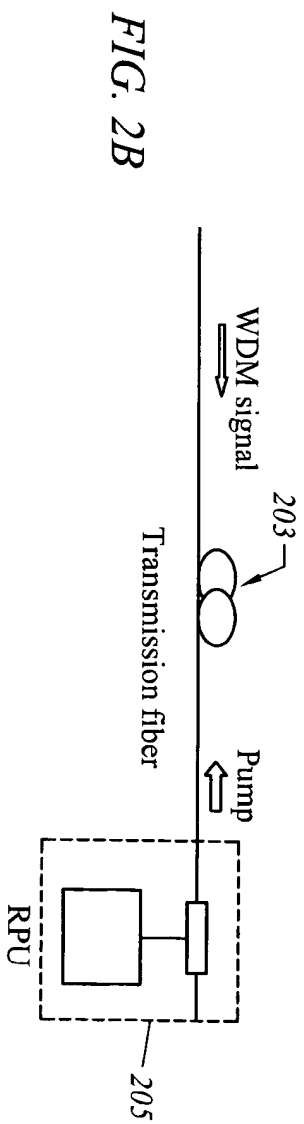
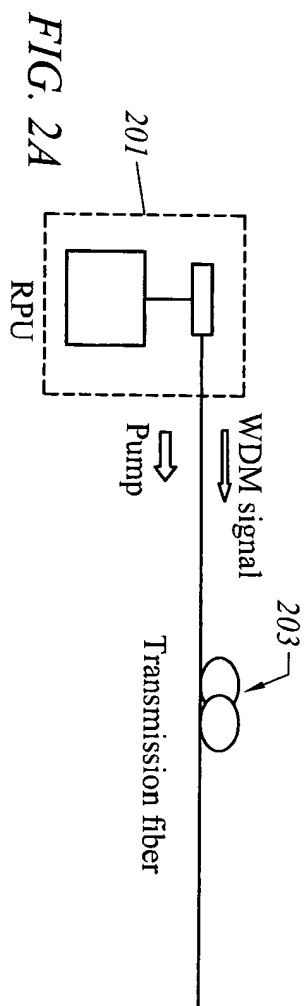


FIG. 1



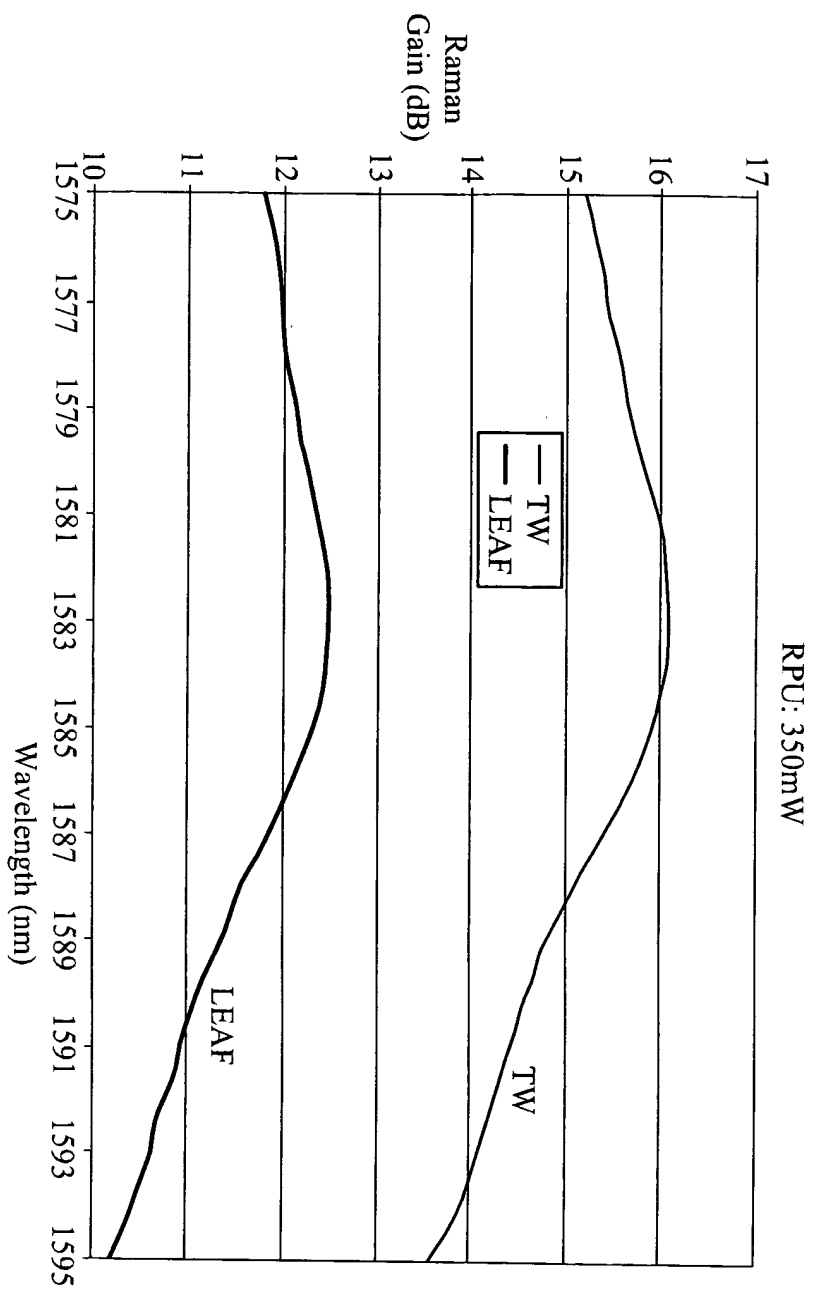


FIG. 3

RPV: 1469 nm, 1477.5 nm, 1486 nm

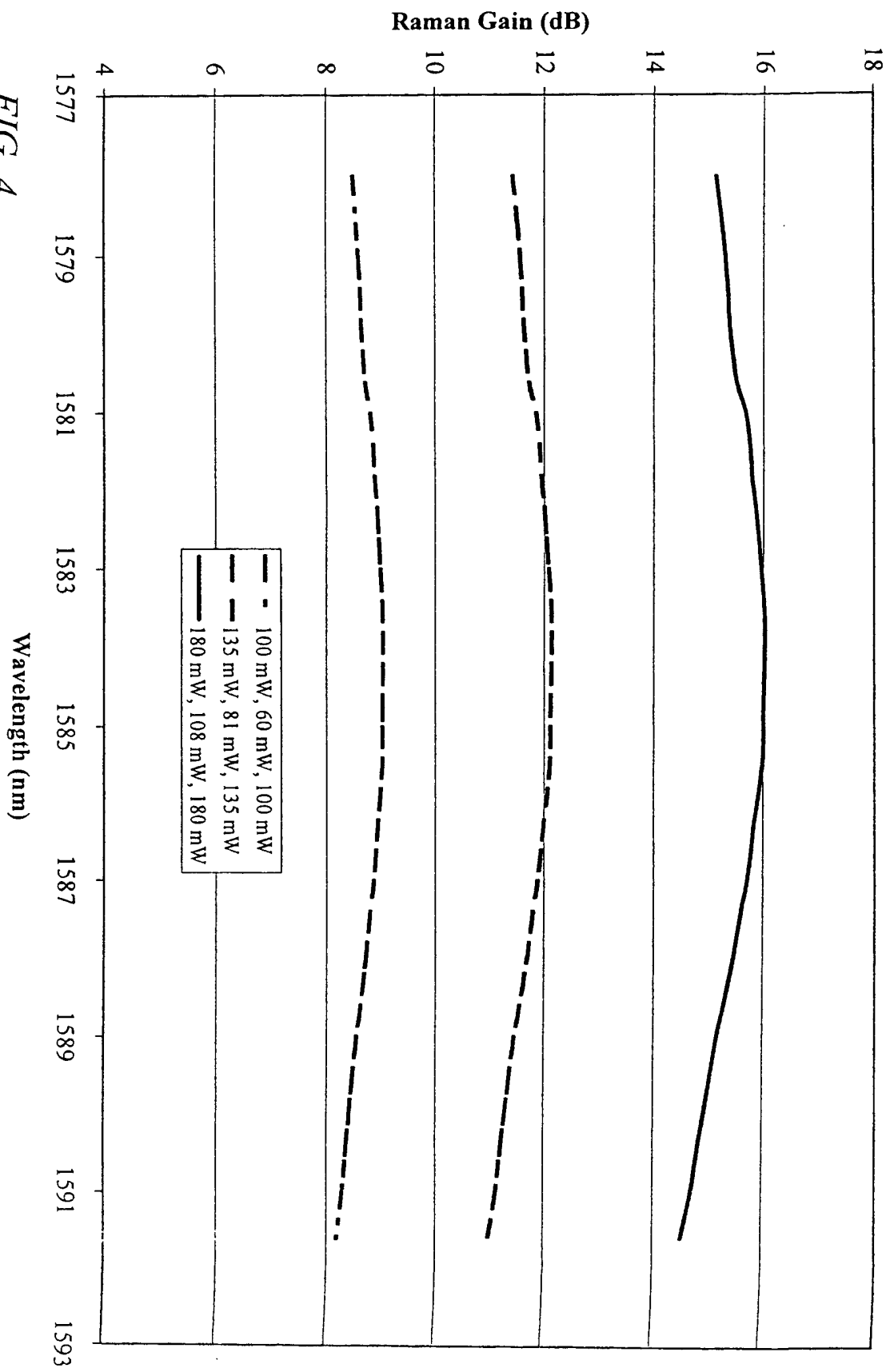


FIG. 4

RPV: 1469 nm(135 mW), 1477.5 nm (81 mW), 1486 nm (135 mW)

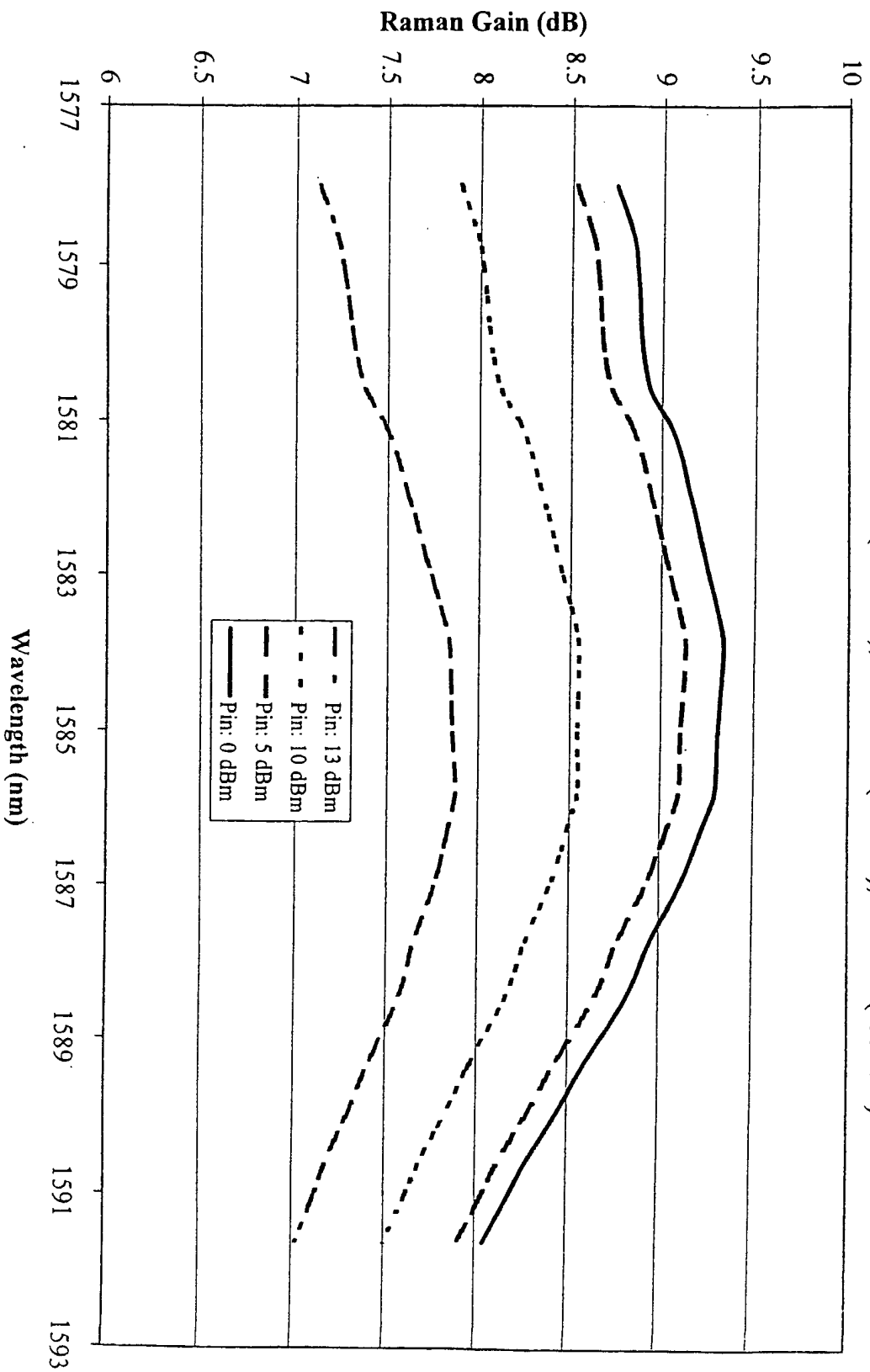


FIG. 5

RPV: 1469 nm, 1477.5 nm, 1486 nm

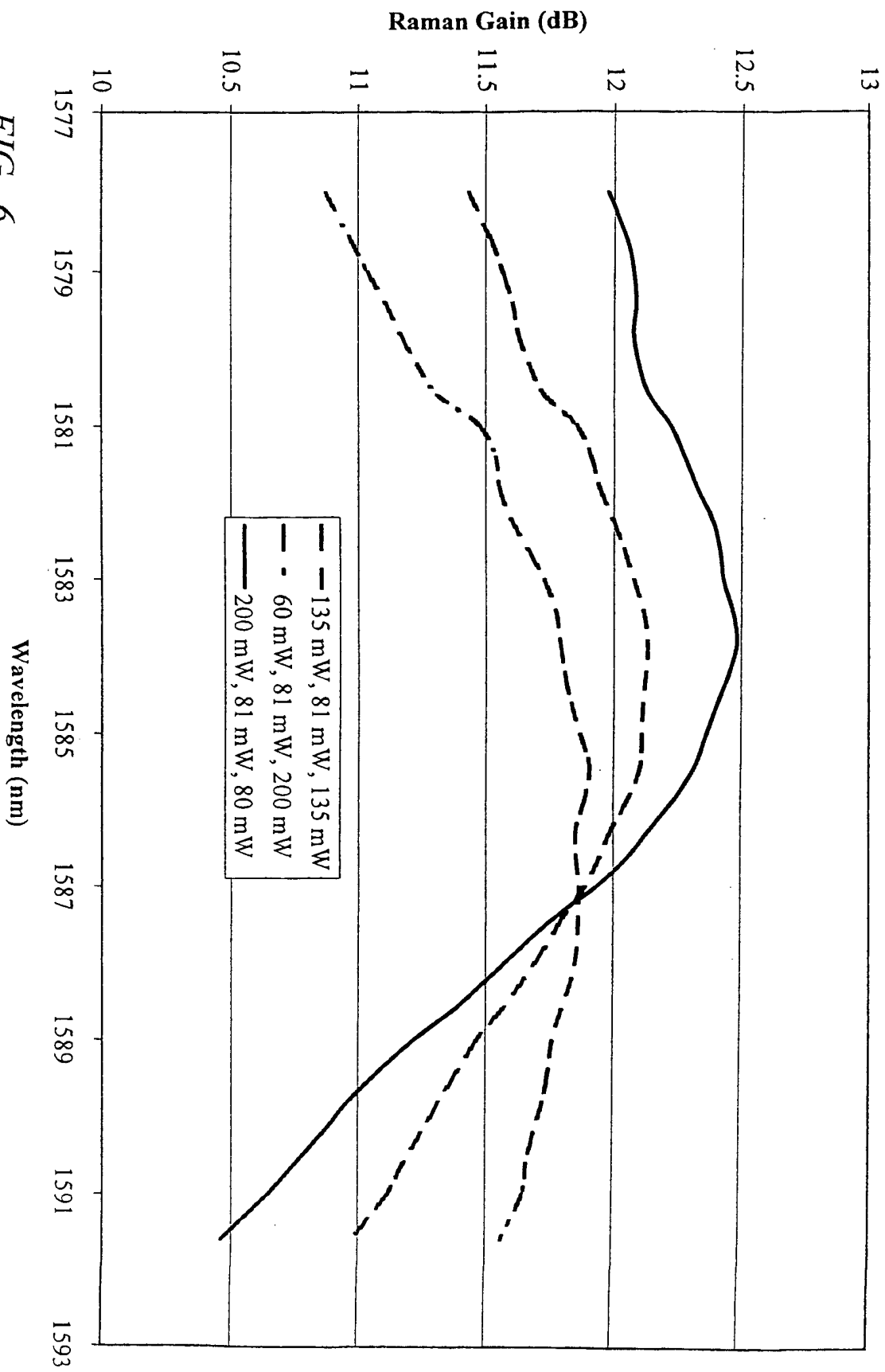


FIG. 6

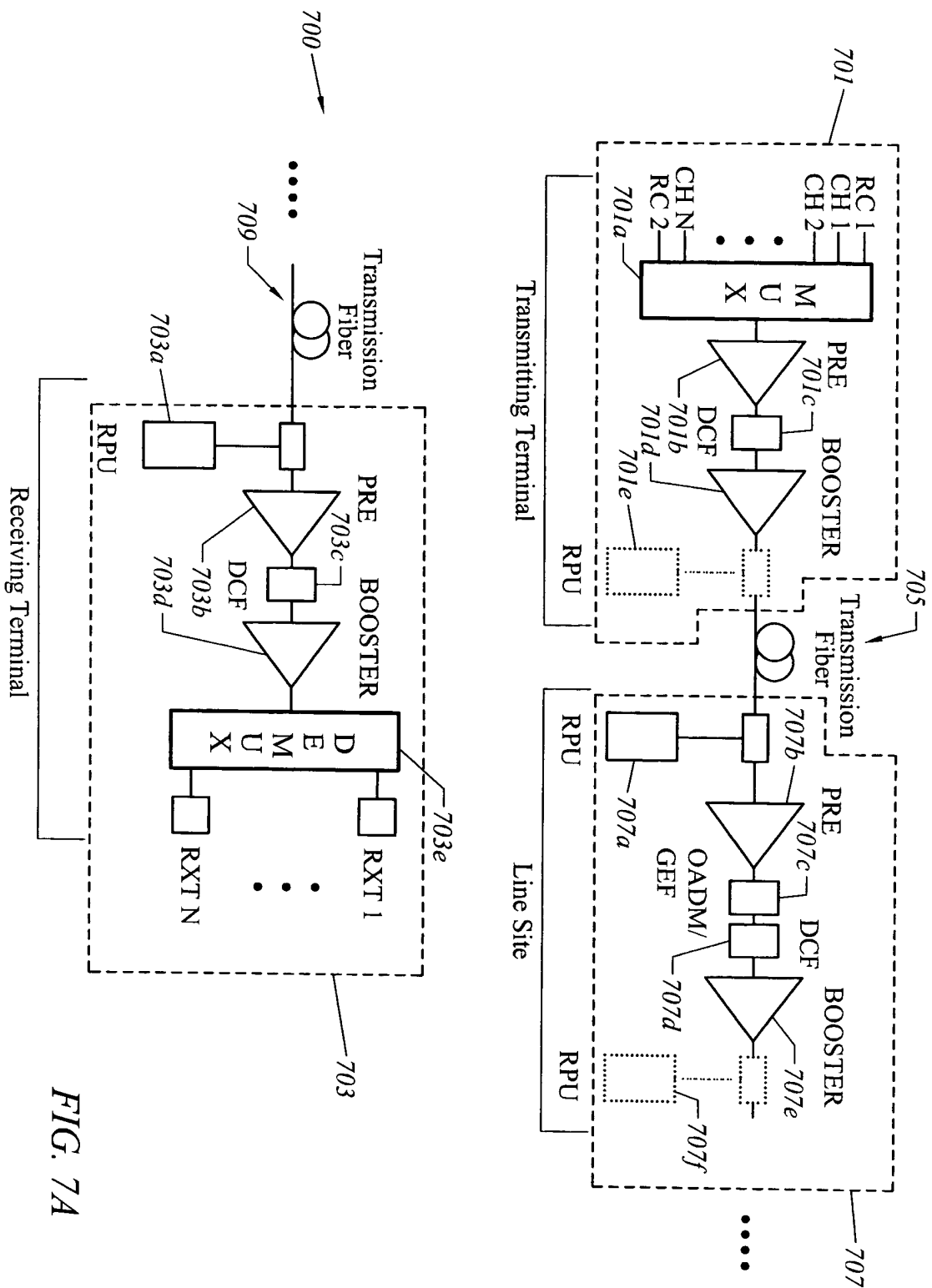
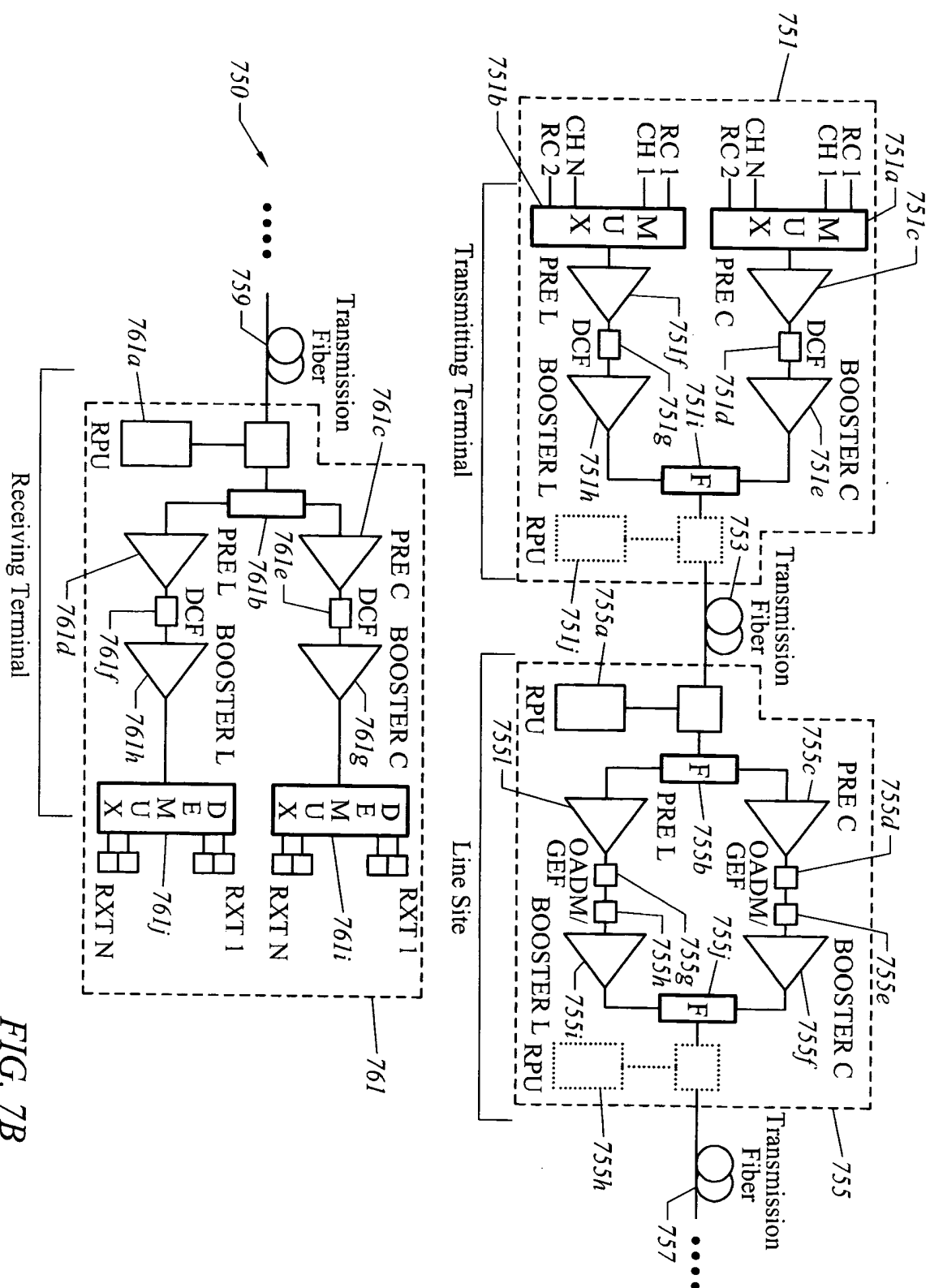


FIG. 7A



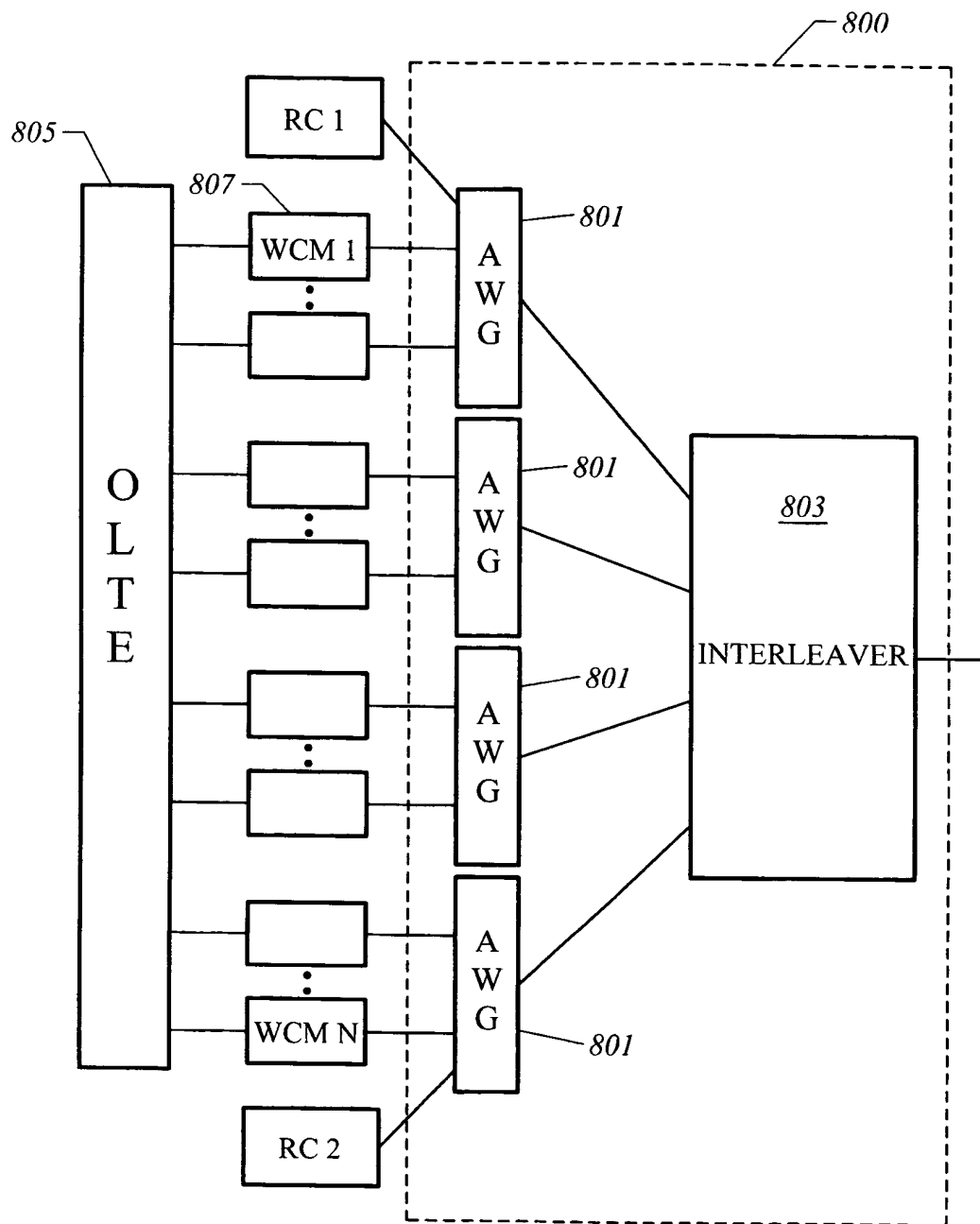


FIG. 8

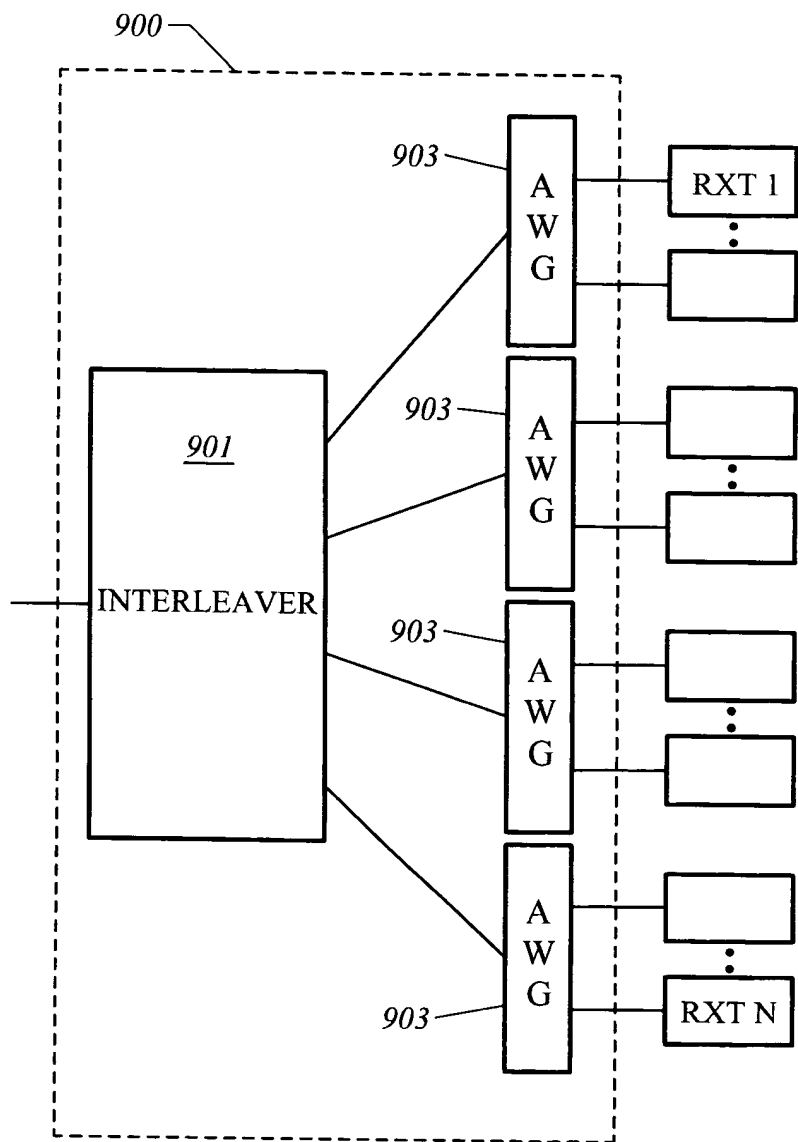


FIG. 9

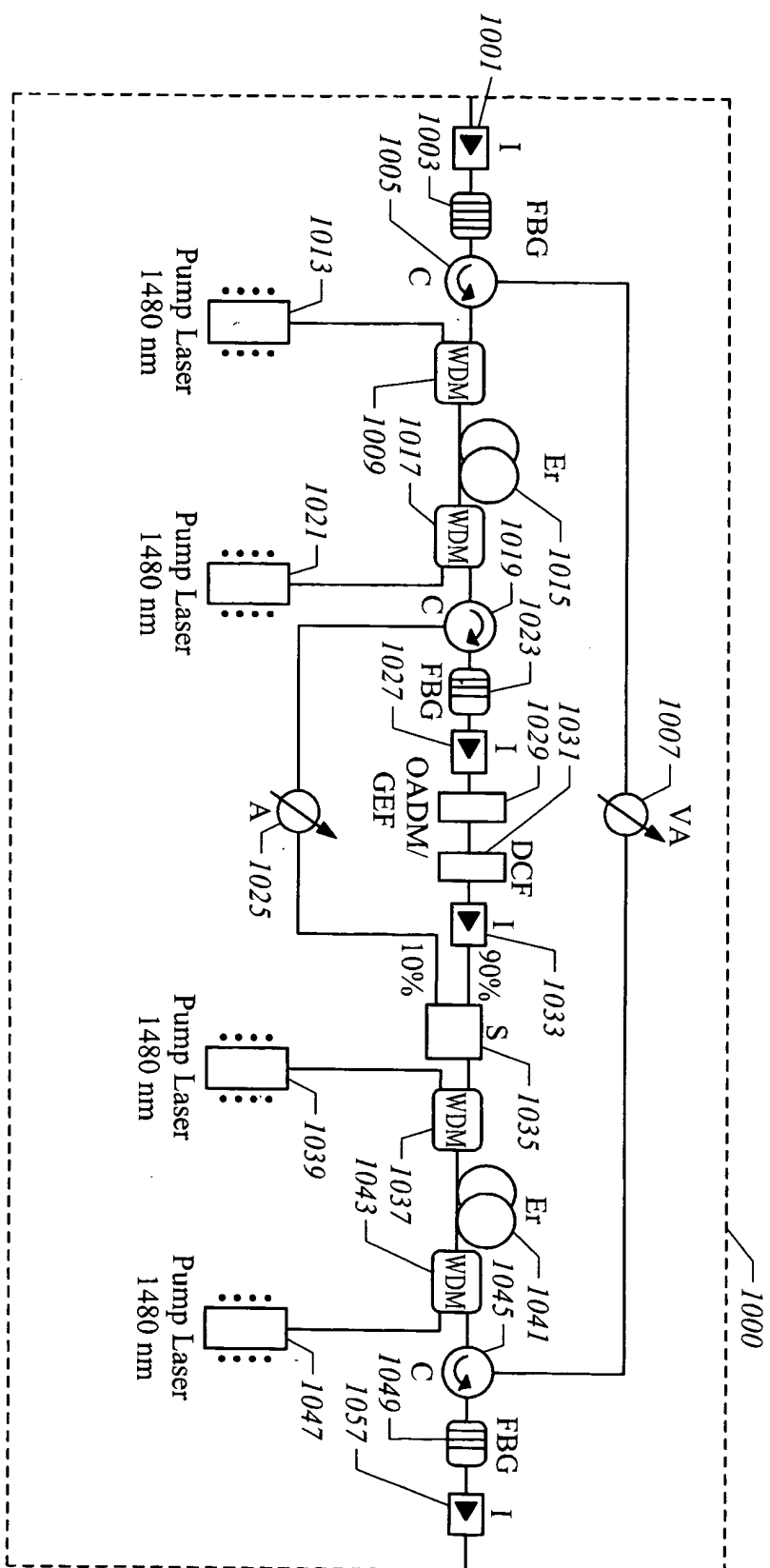


FIG. 10

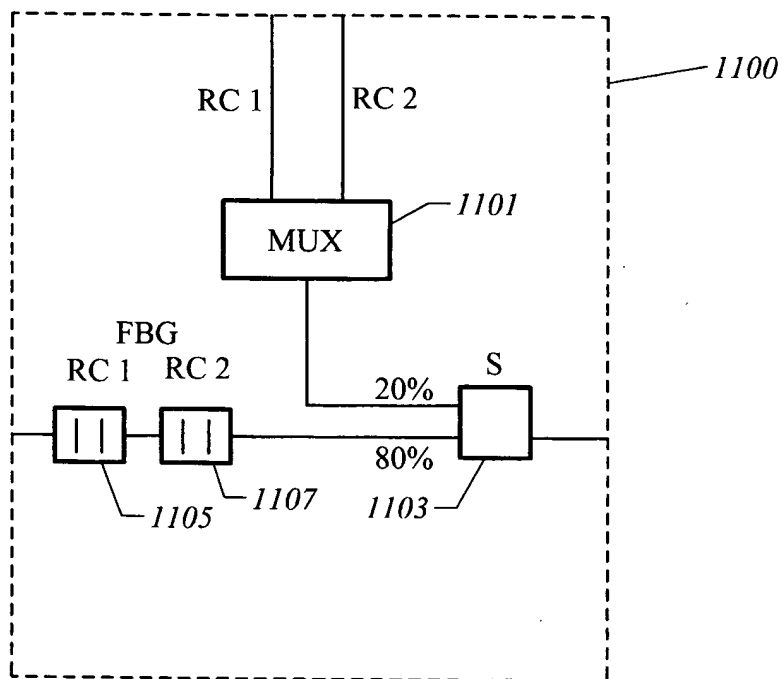


FIG. 11

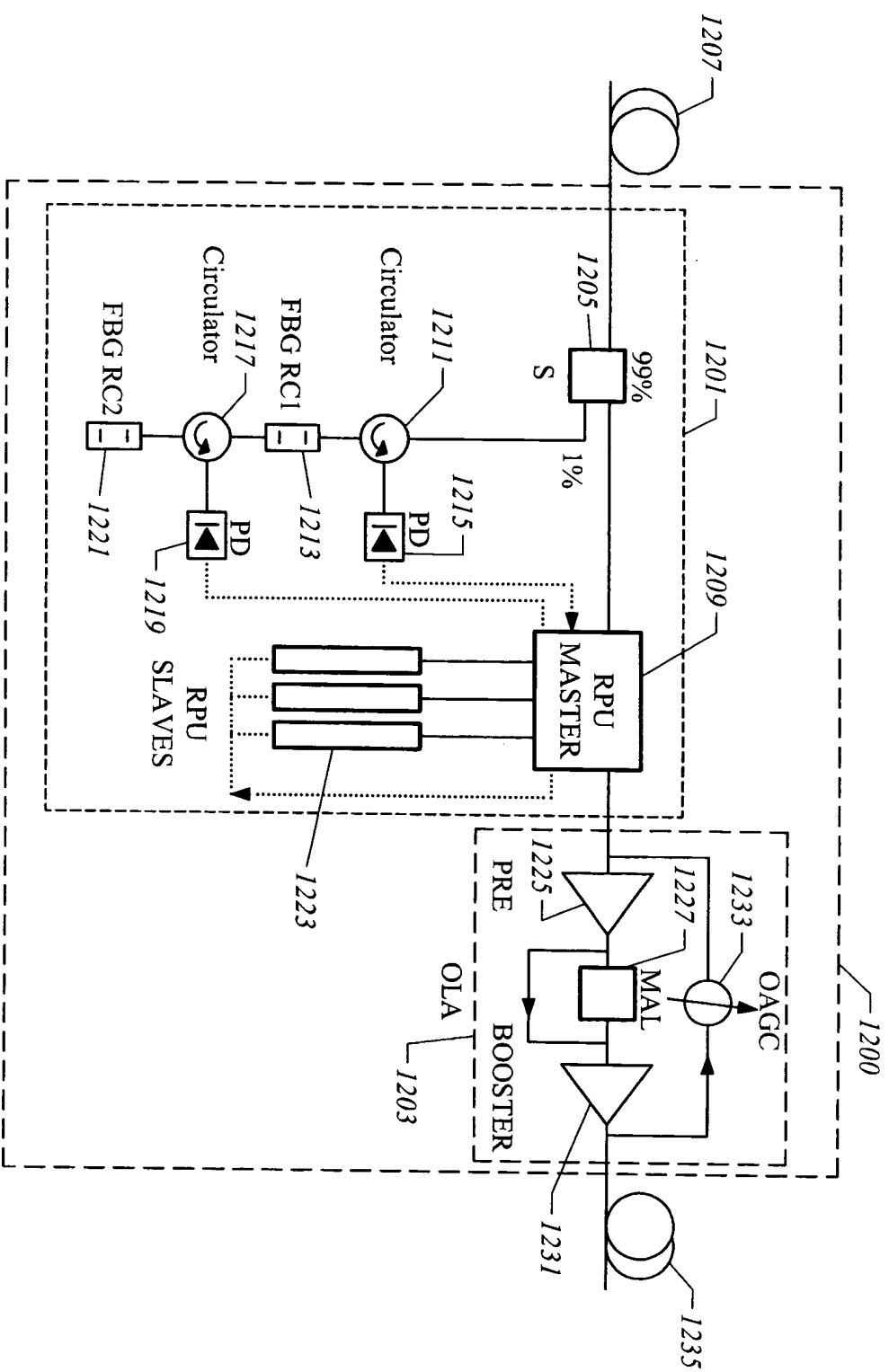


FIG. 12

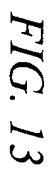


FIG. 13

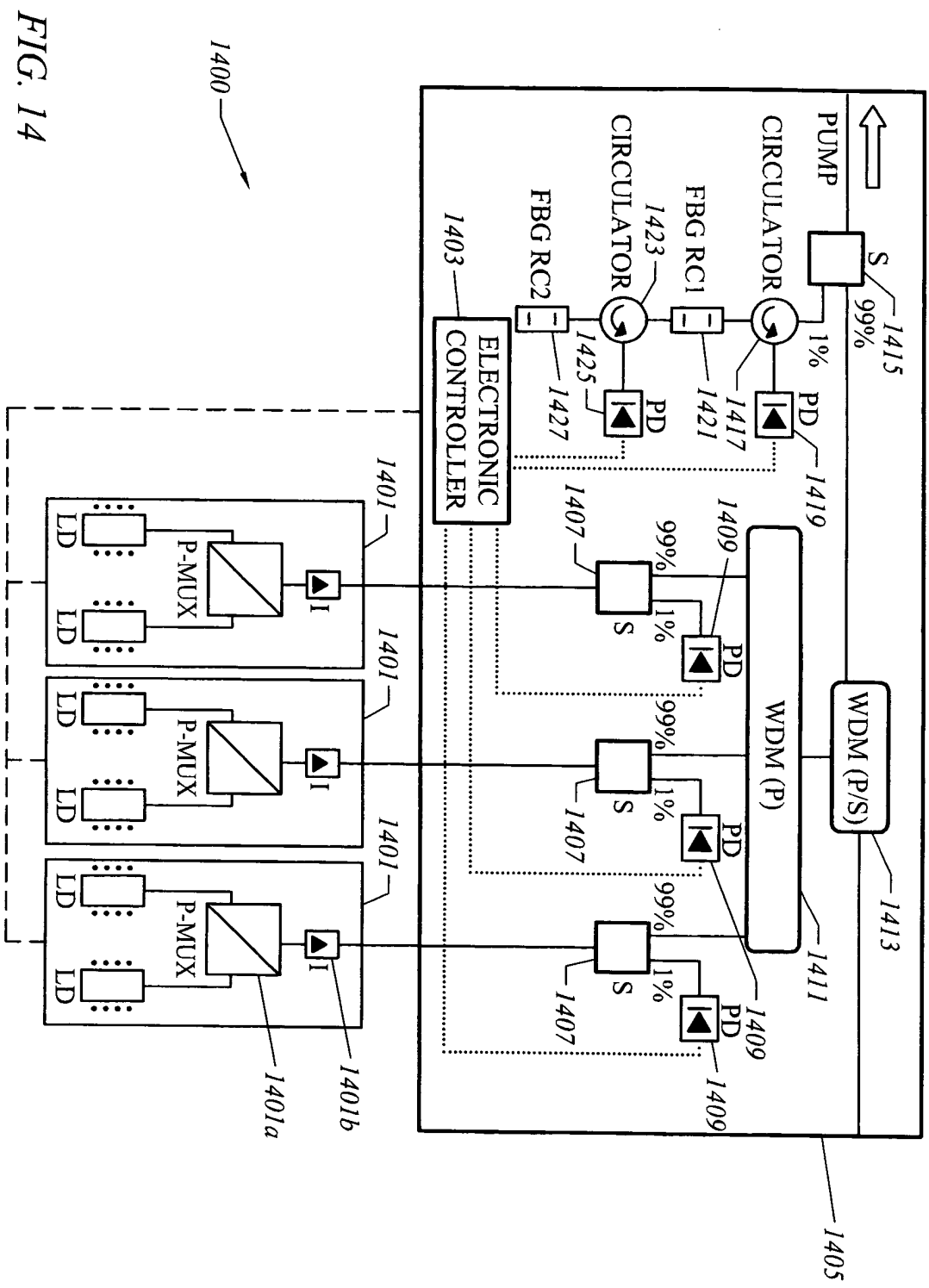


FIG. 14

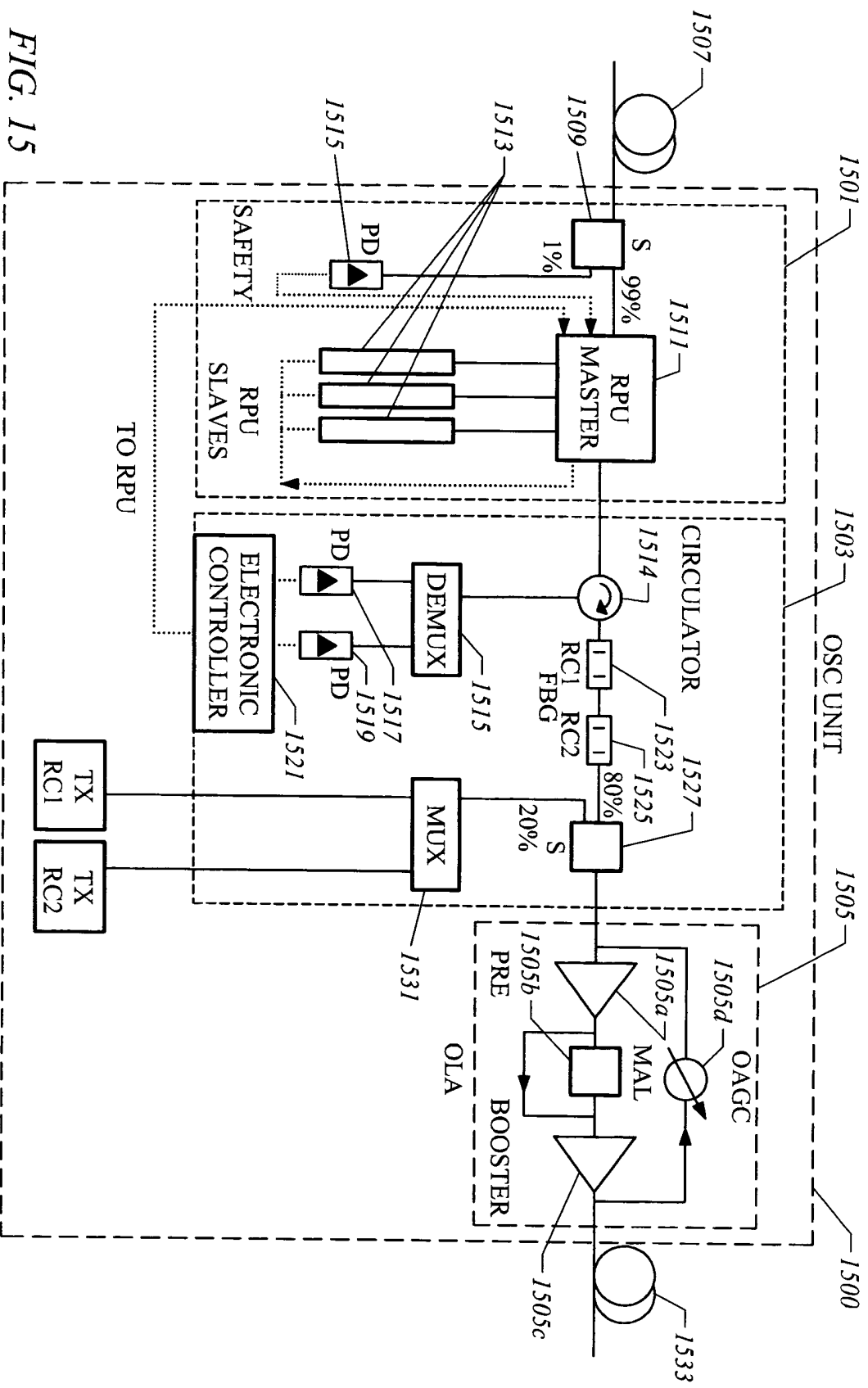


FIG. 15

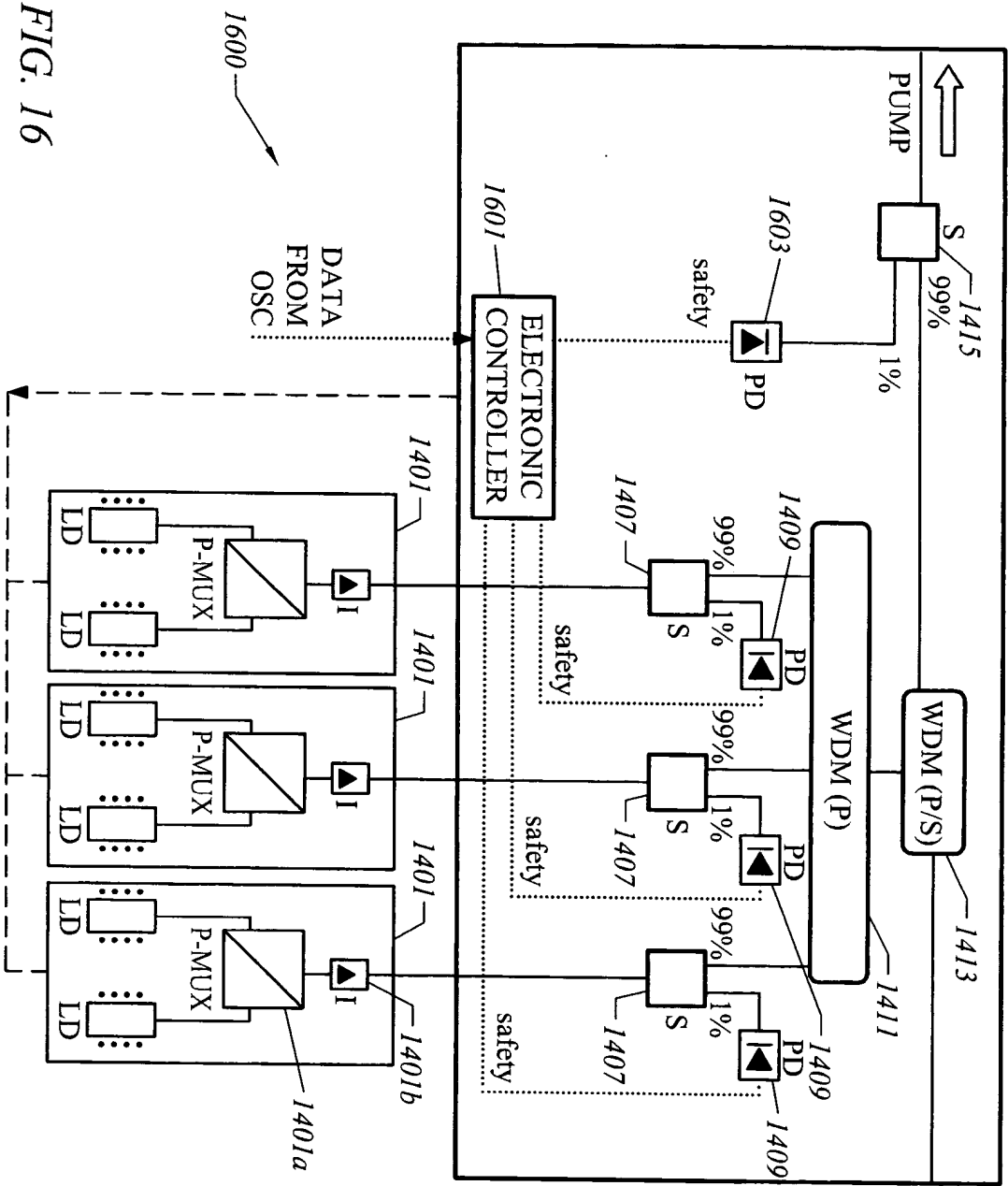


FIG. 16

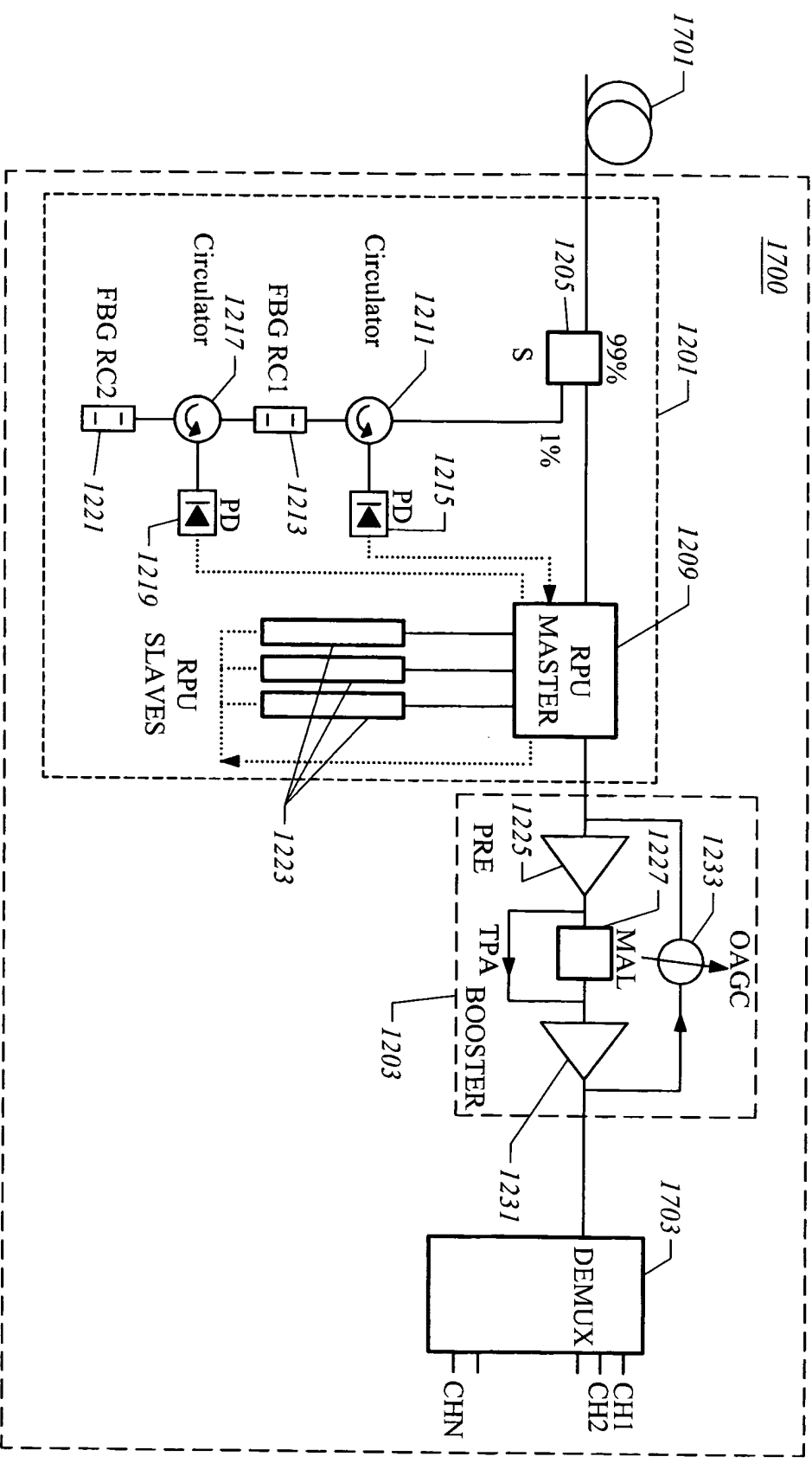


FIG. 17

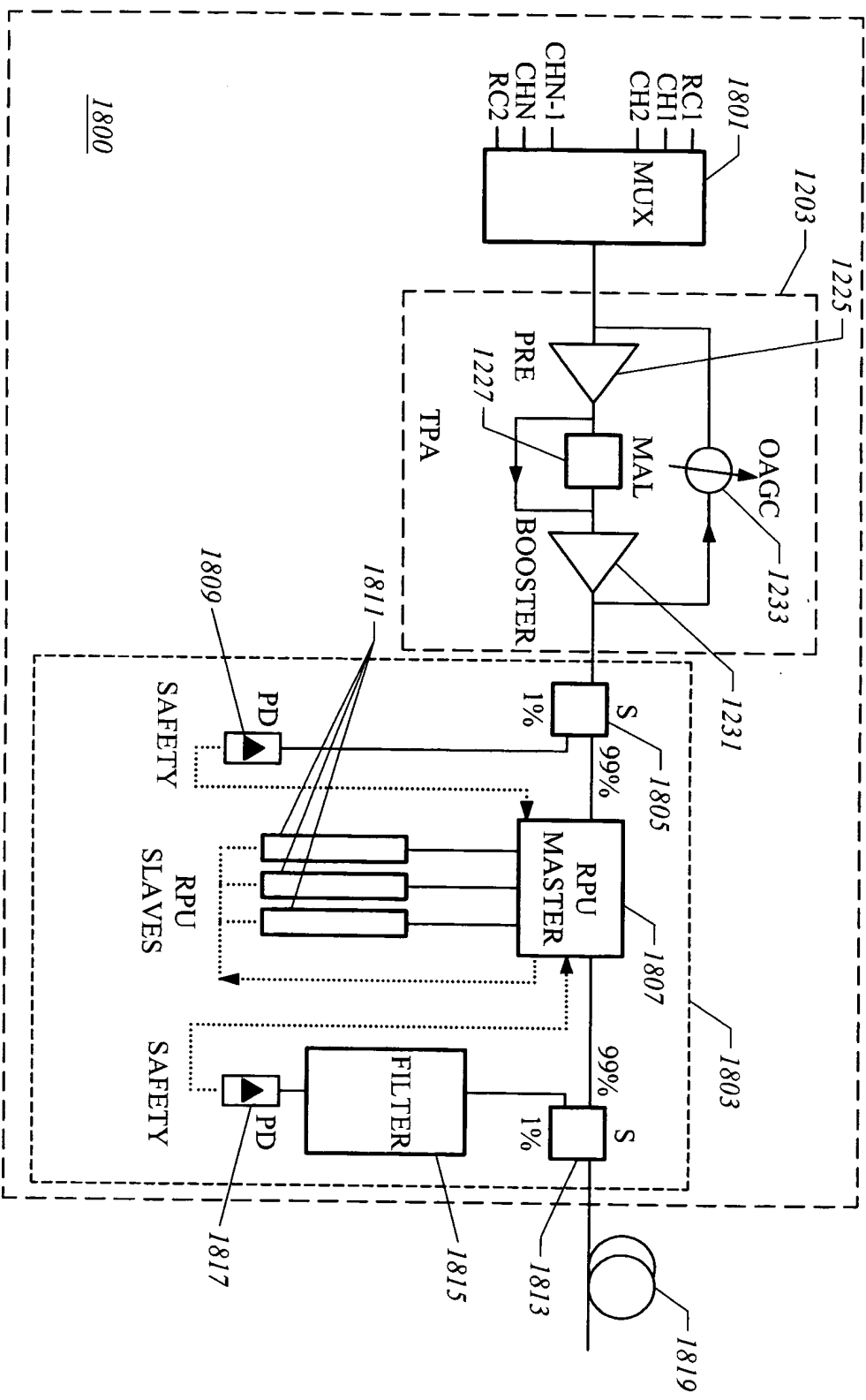


FIG. 18

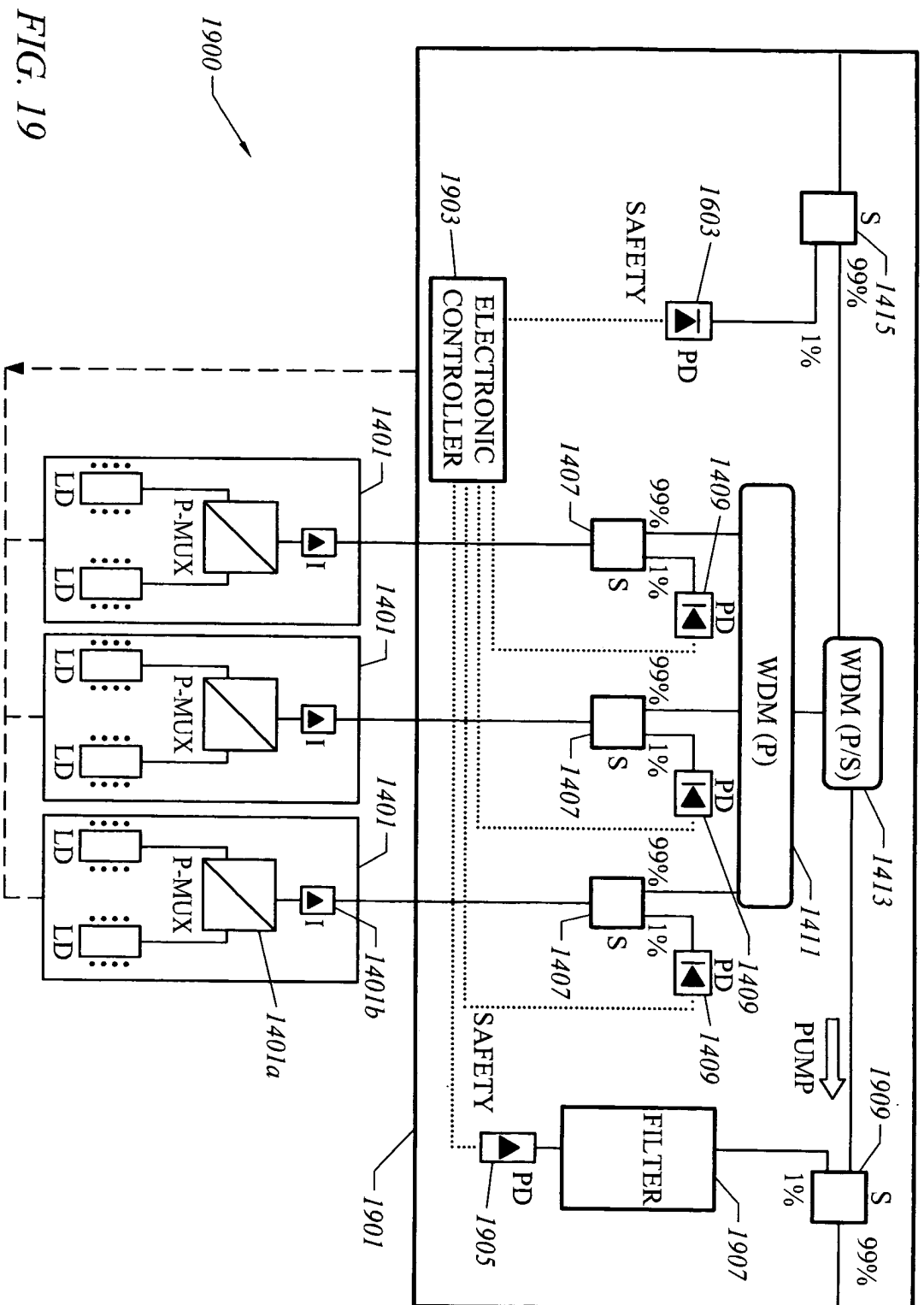


FIG. 19

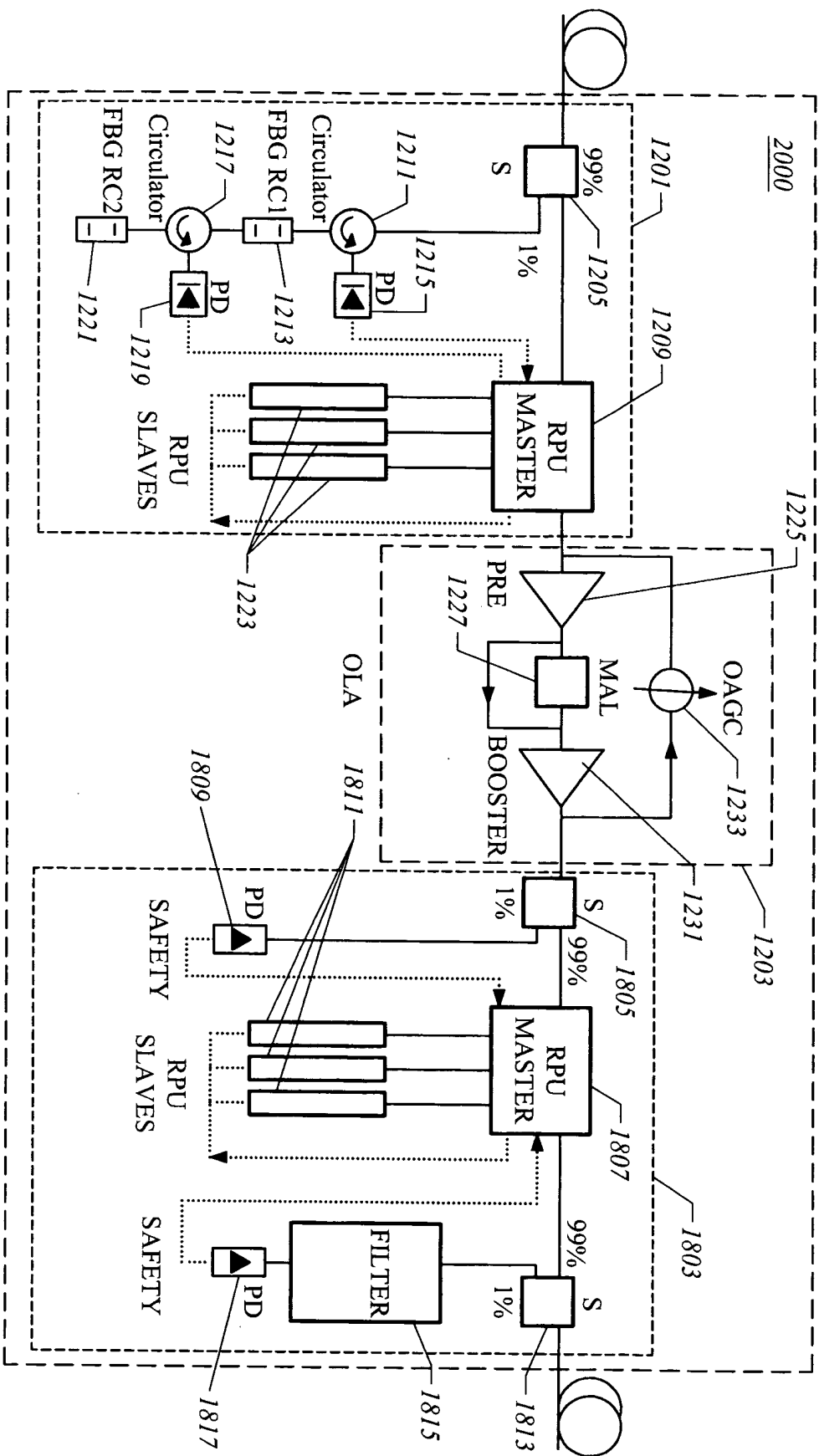


FIG. 20

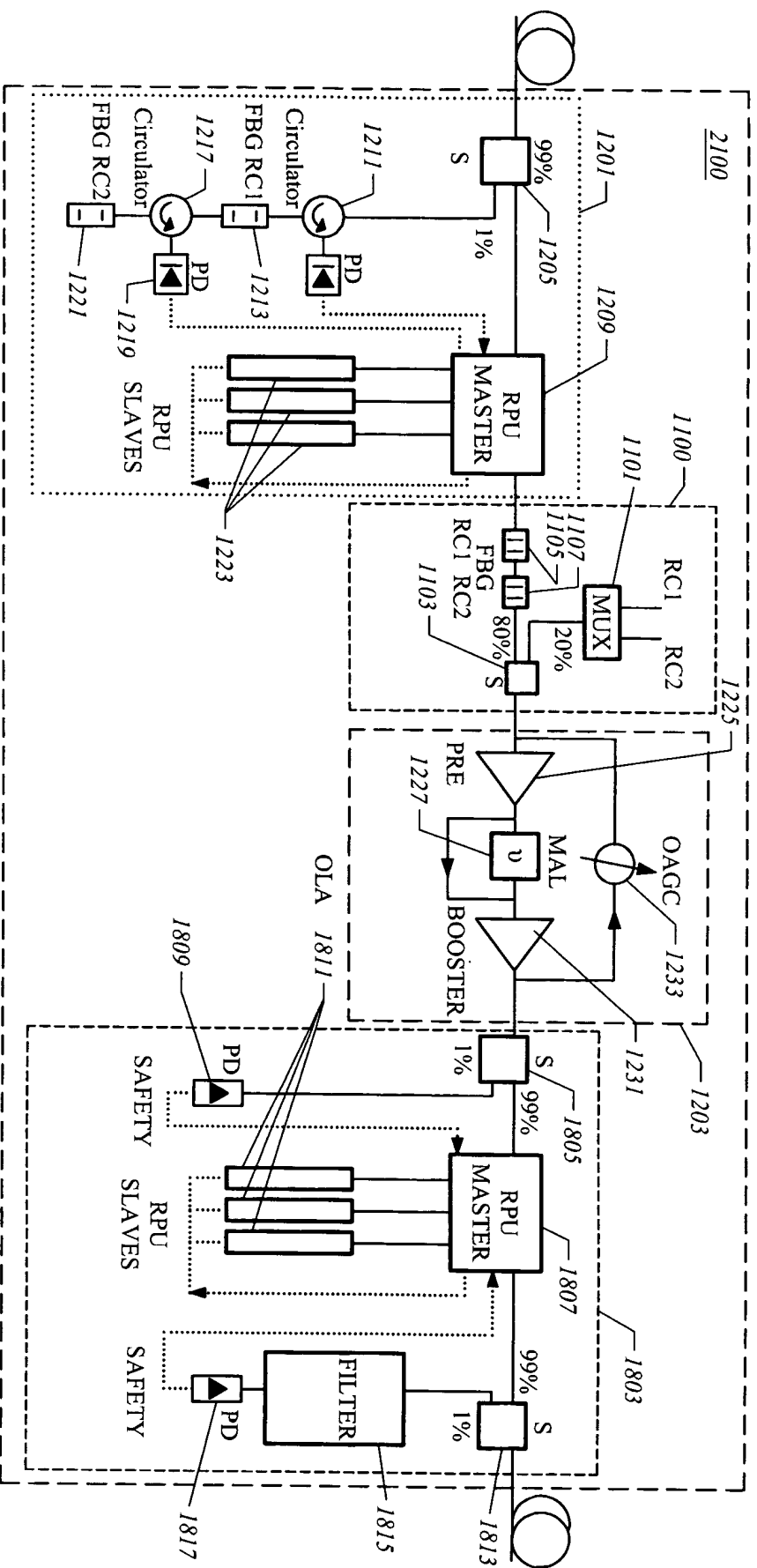


FIG. 21

Fig. 23: Gain versus input signal power
Channel 1579 nm

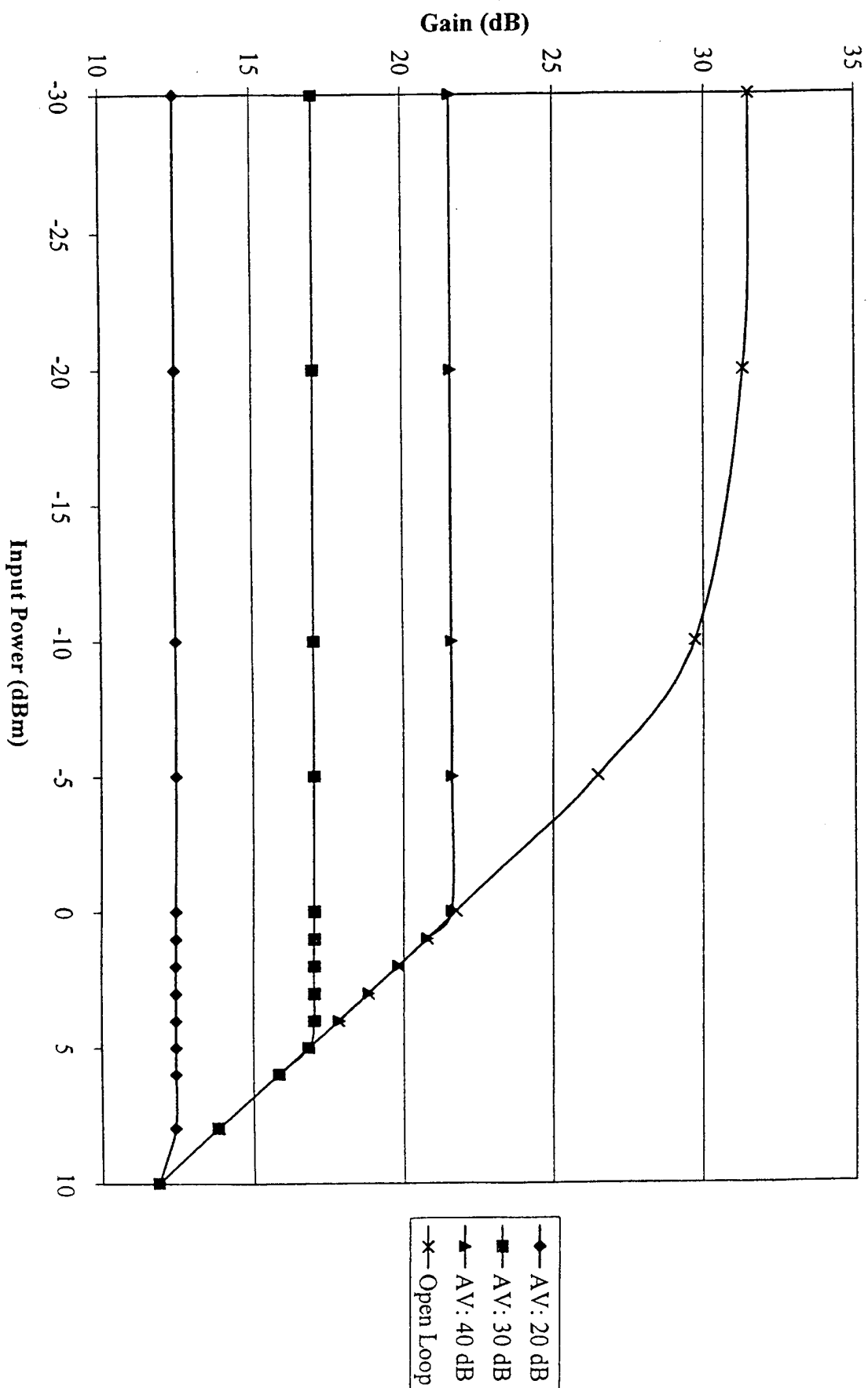


Fig. 24: Gain versus input signal power
Channel 1592 nm

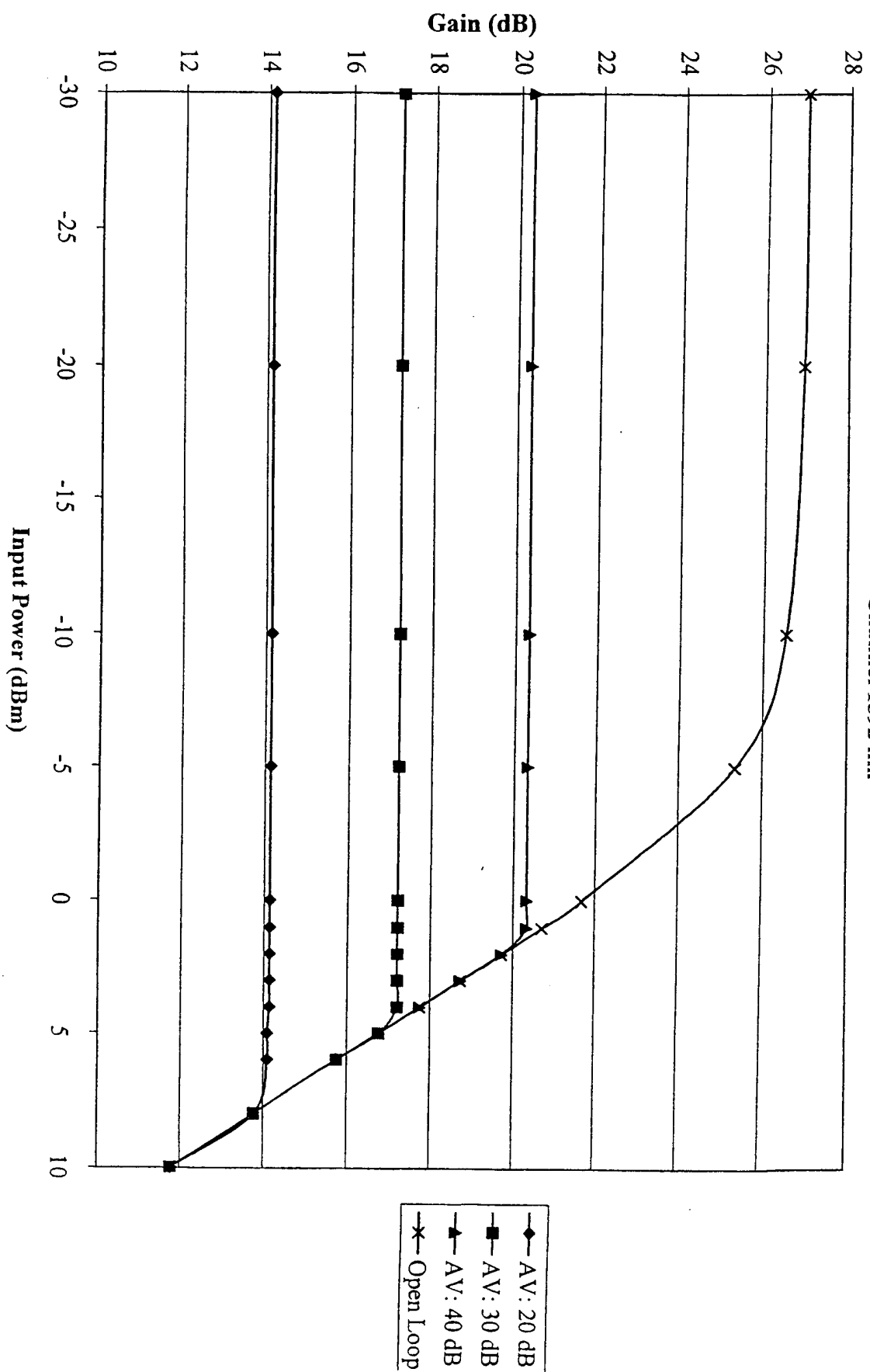


Fig. 25: EDFA output spectra with 32 channels and only 1 channel

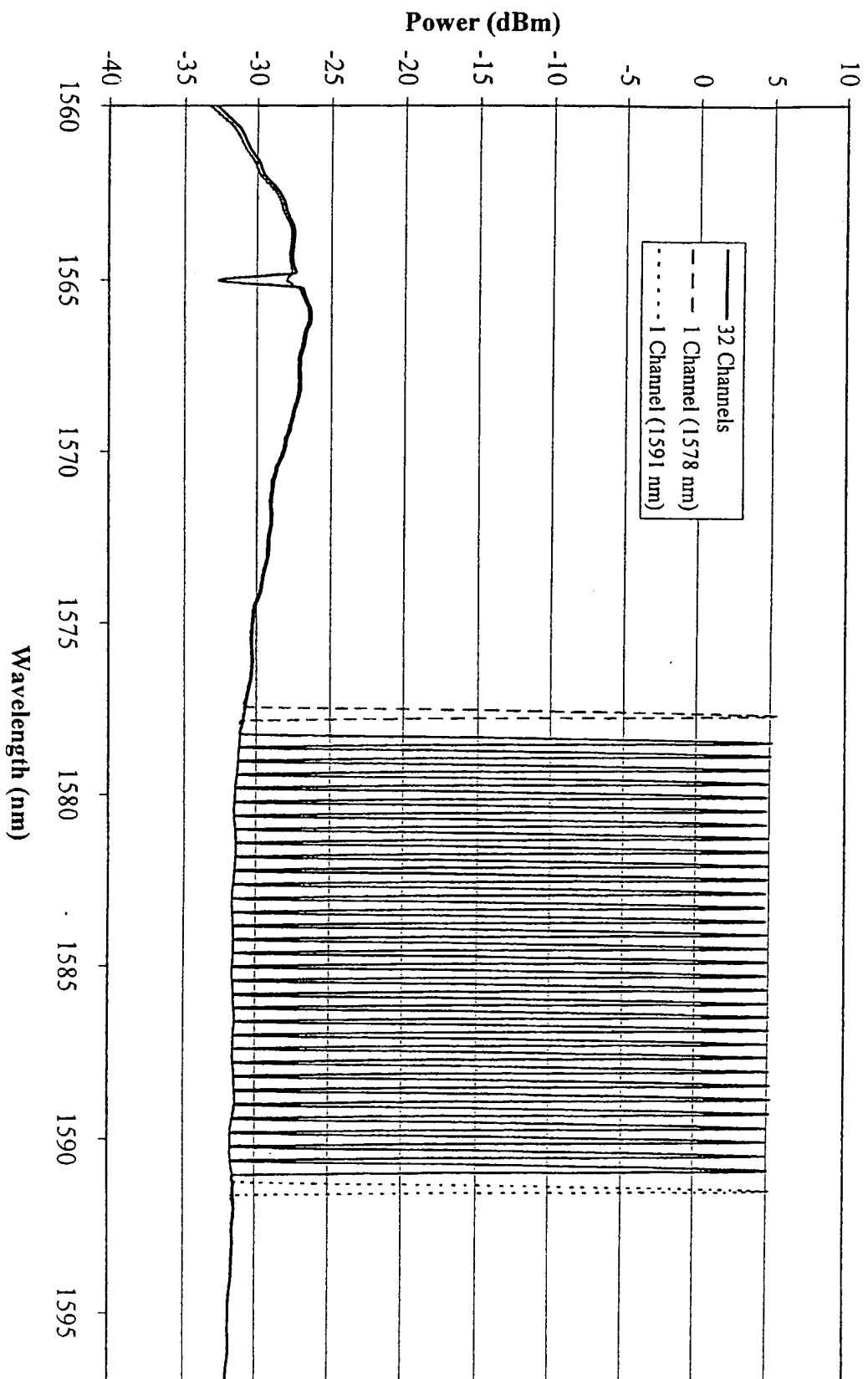


Fig. 26: Gain Equalising Filter (every three spans) with counter-propagant Raman pumping

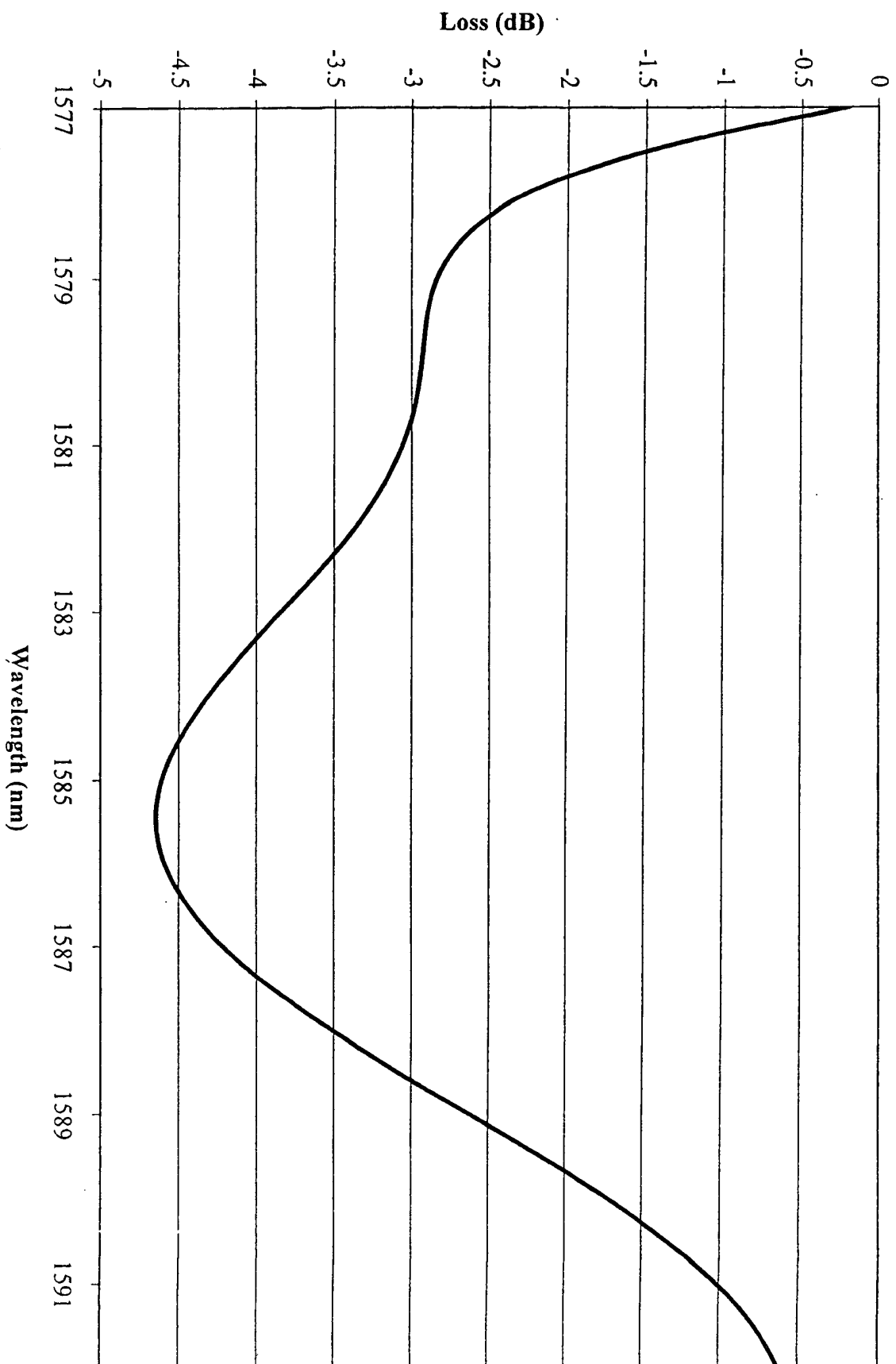


Fig. 27: Output spectrum (NZDS Fiber 25x23 dB) without reference channels

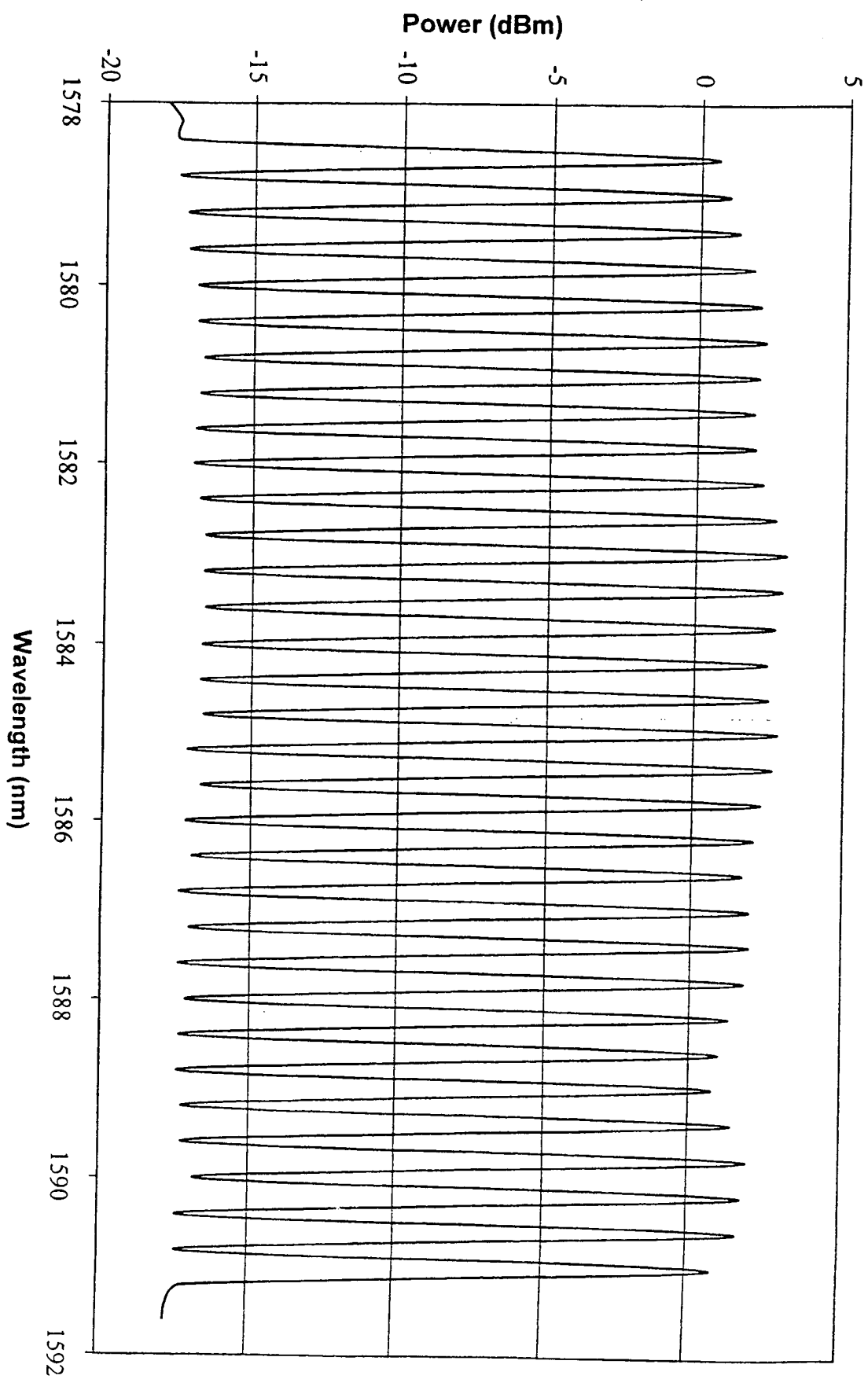


Fig. 28: OSNR (25x23 dB, NZDS Fiber) with 32 channels without reference channels

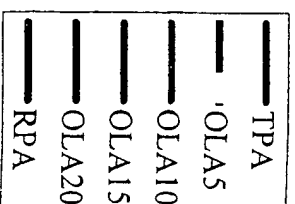
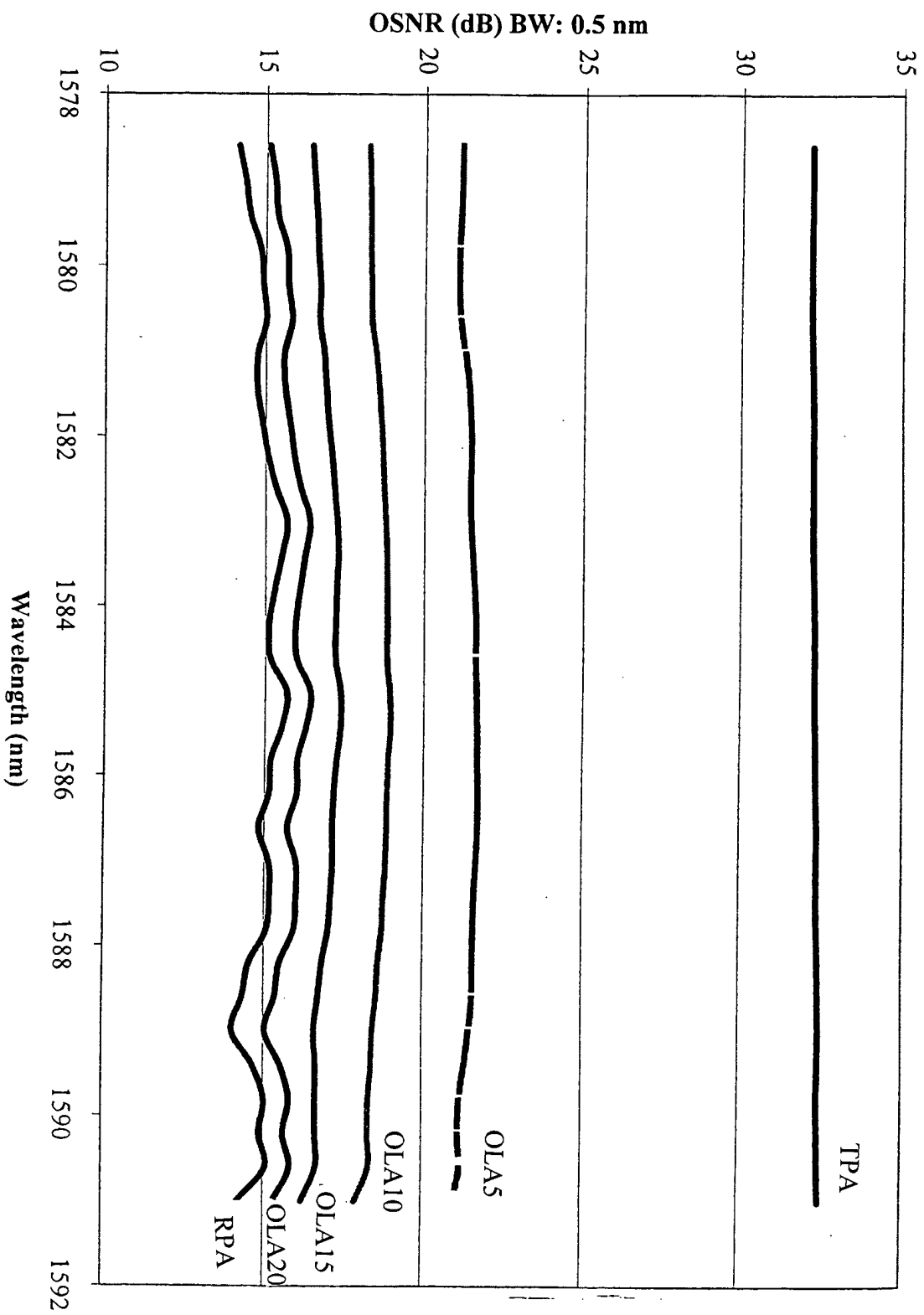
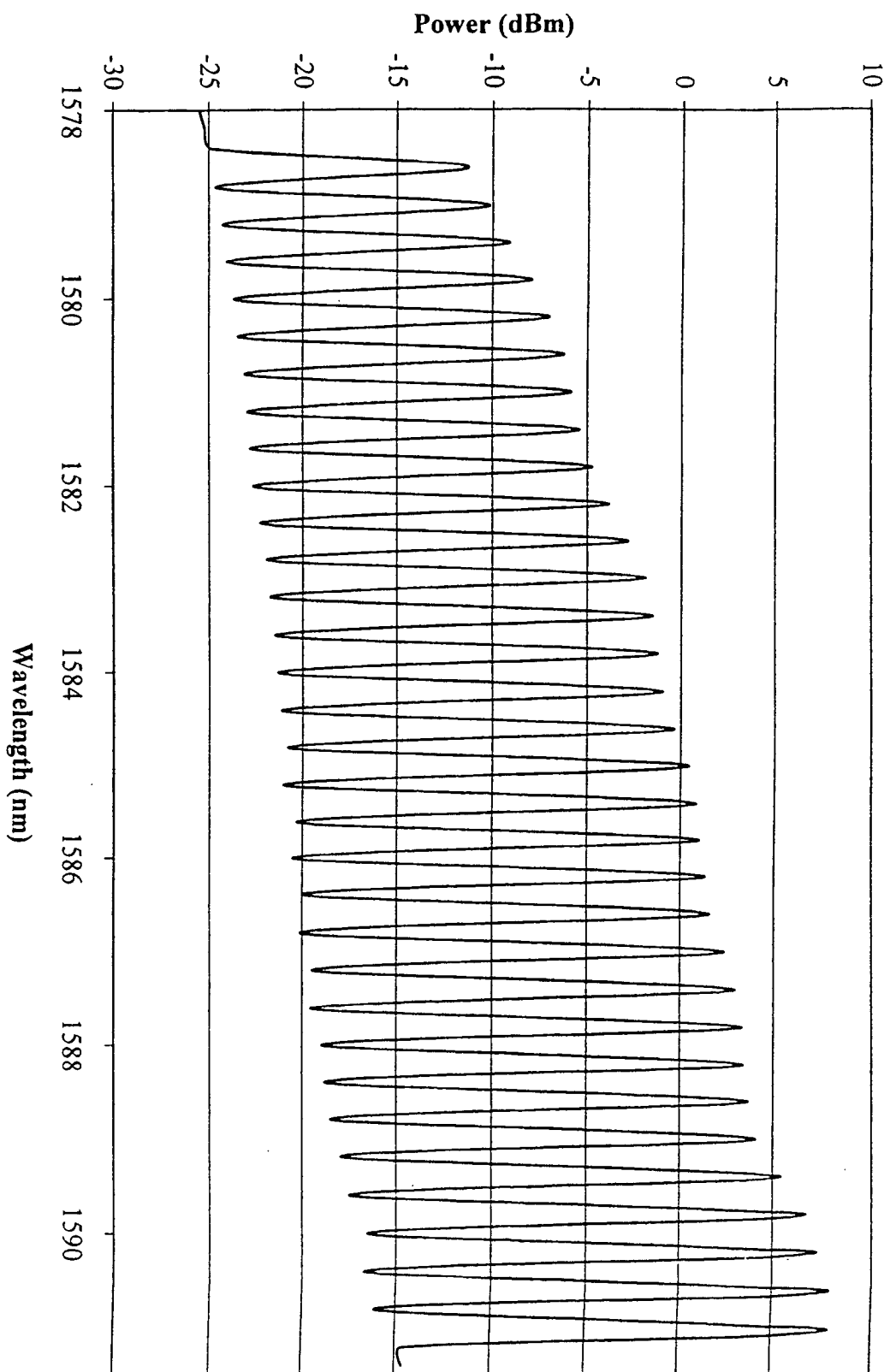


Fig. 29:



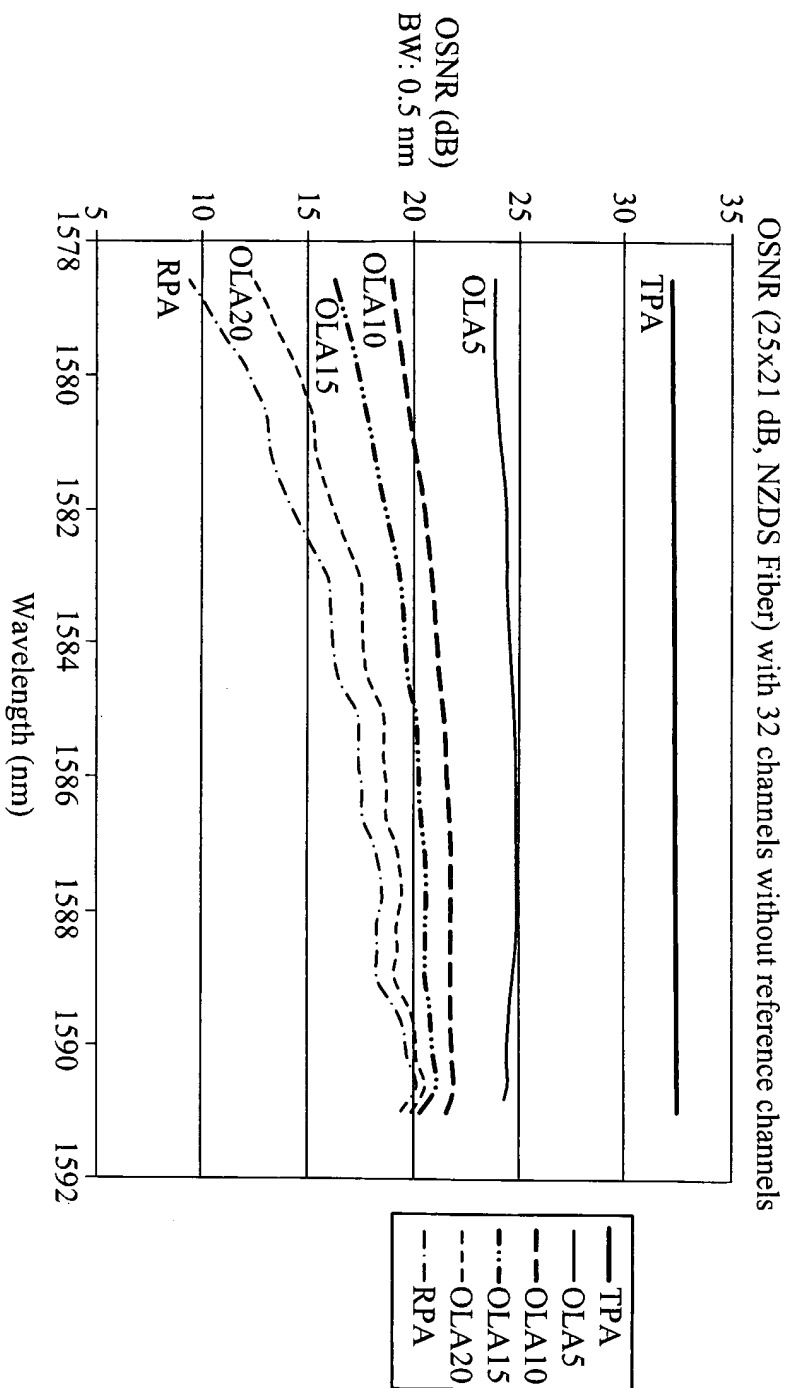


FIG. 30

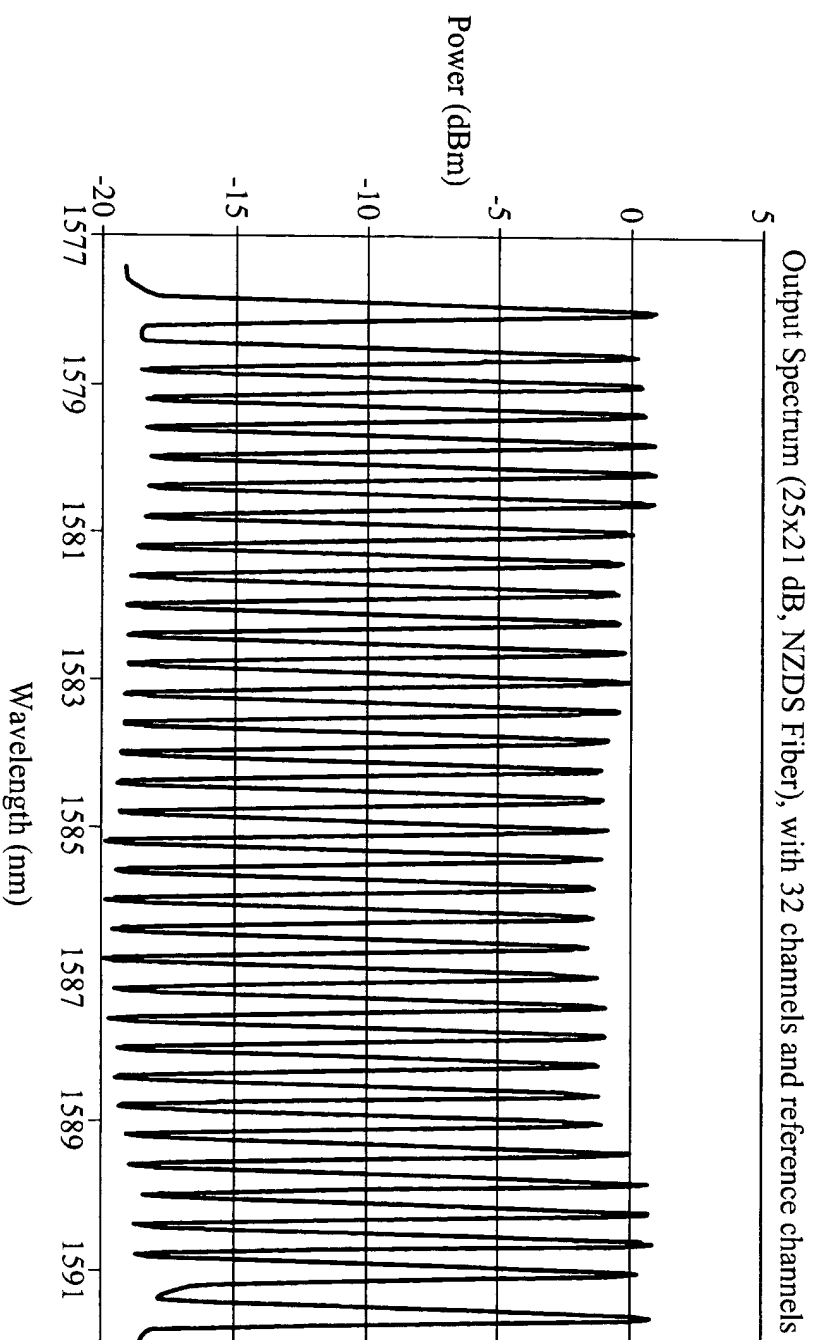


FIG. 31

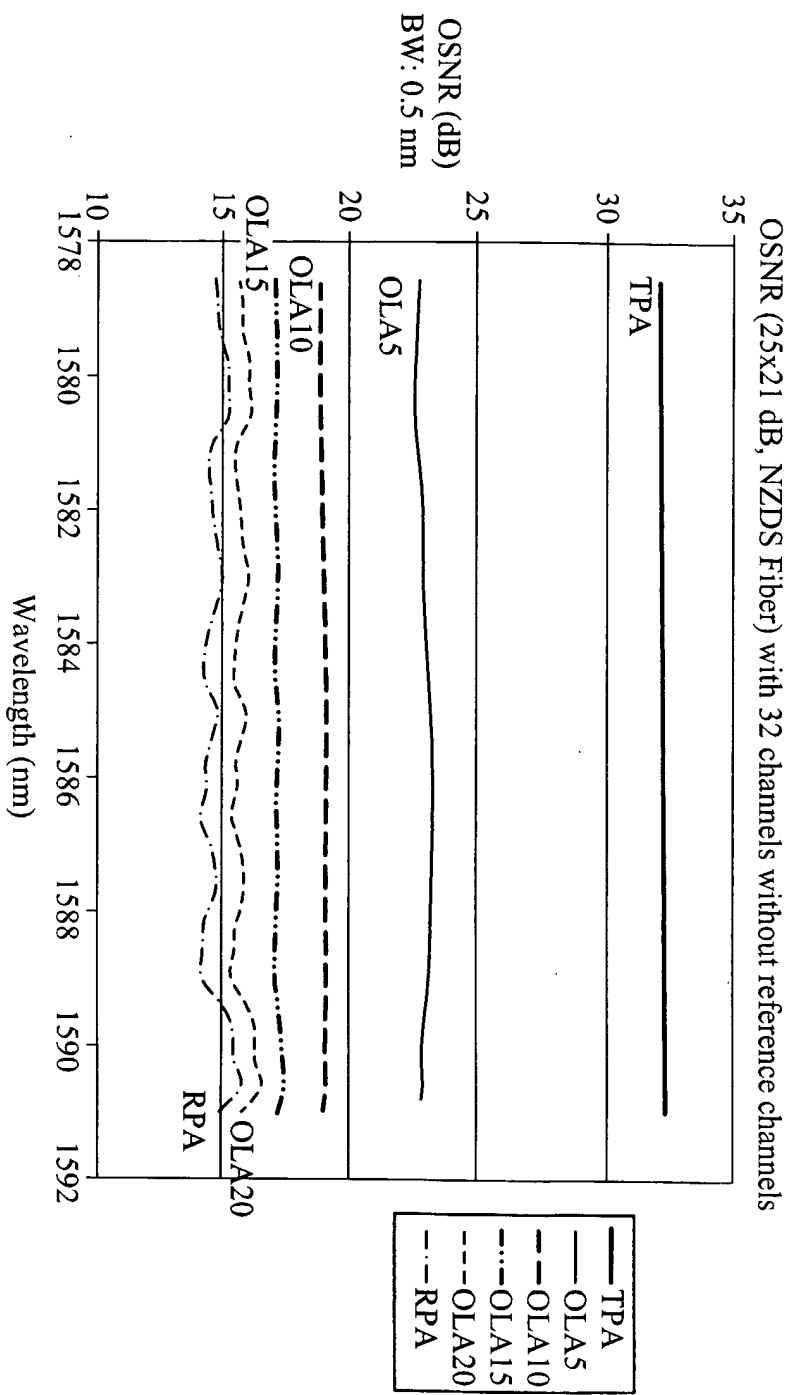


FIG. 32

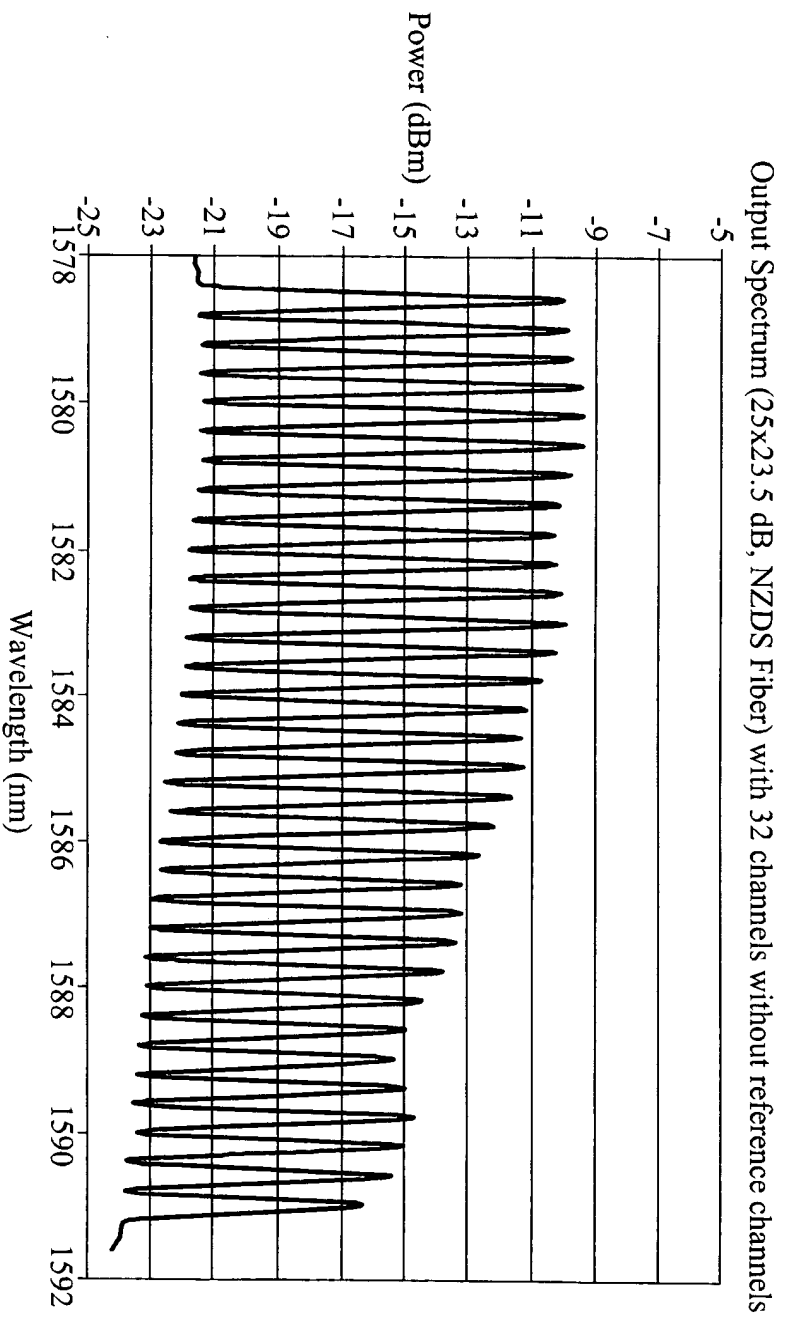


FIG. 33

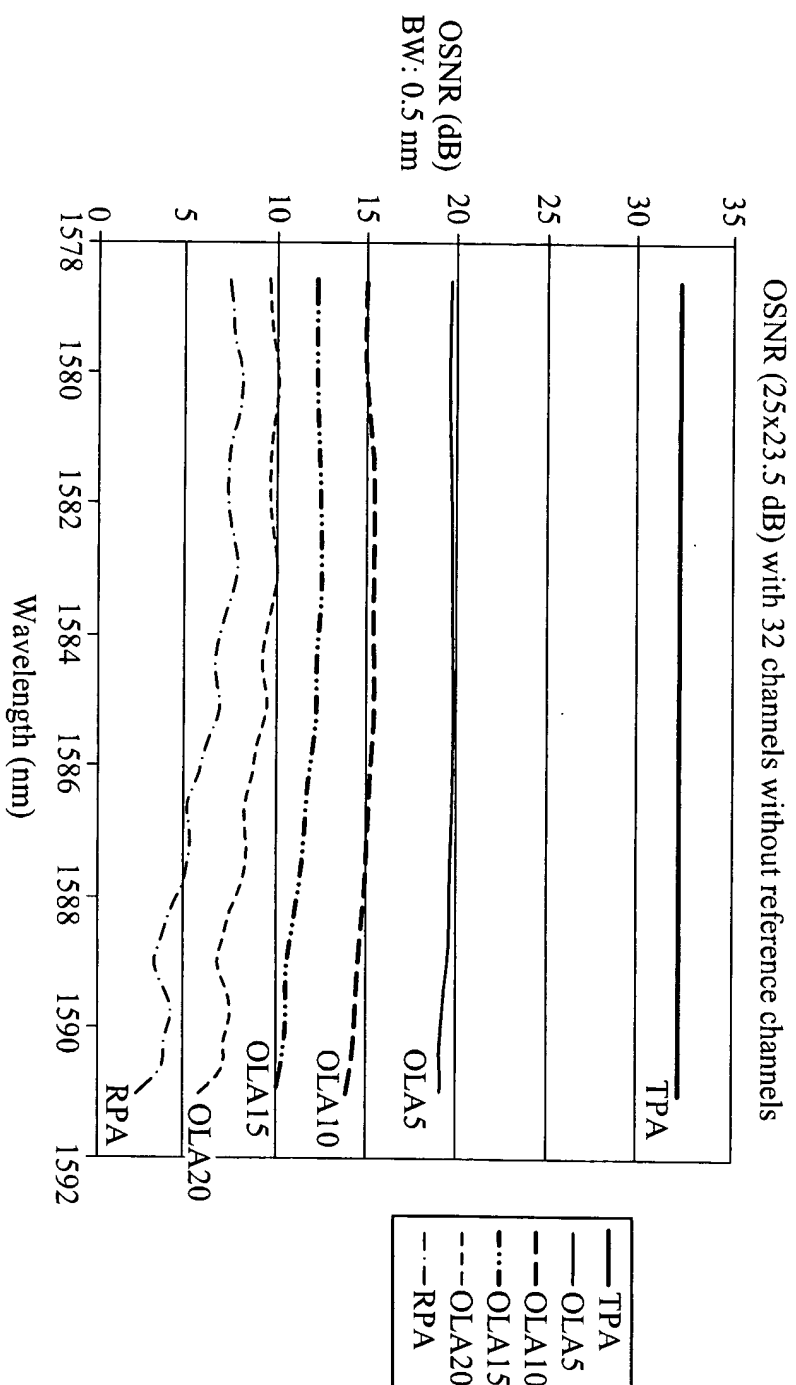


FIG. 34

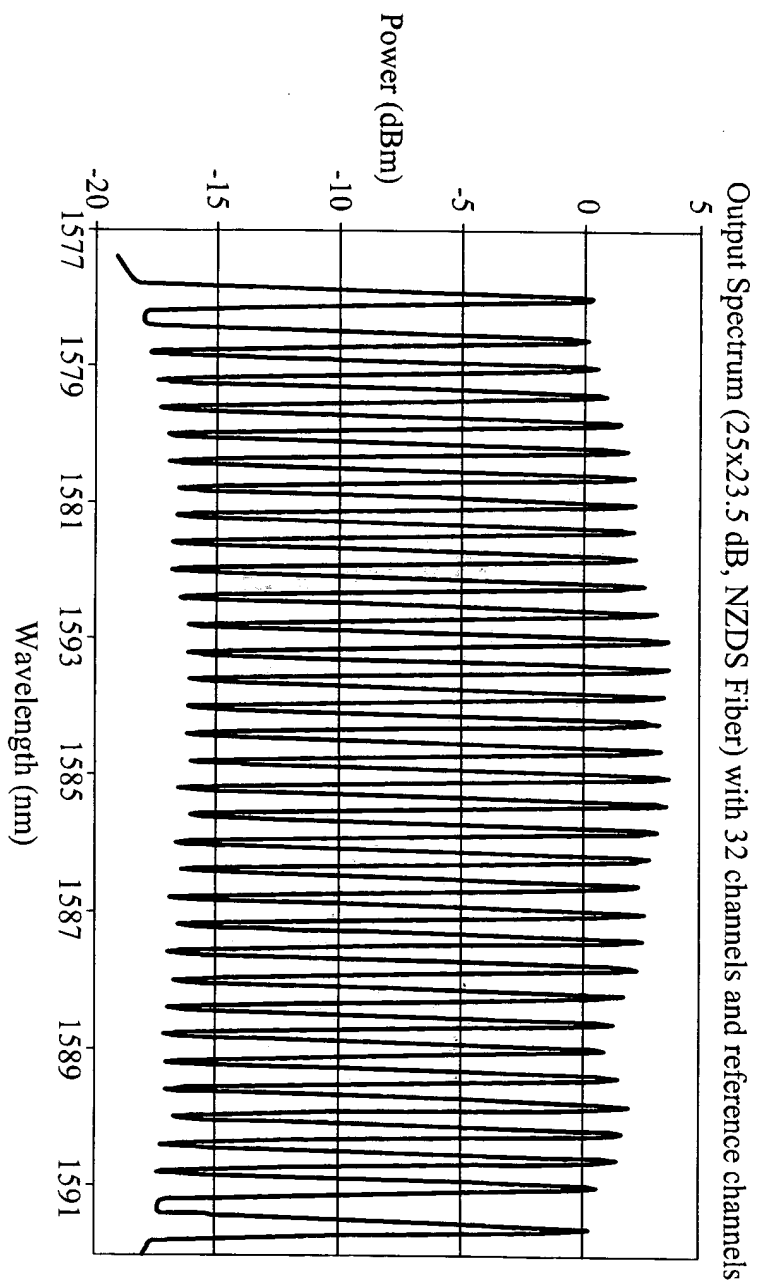


FIG. 35

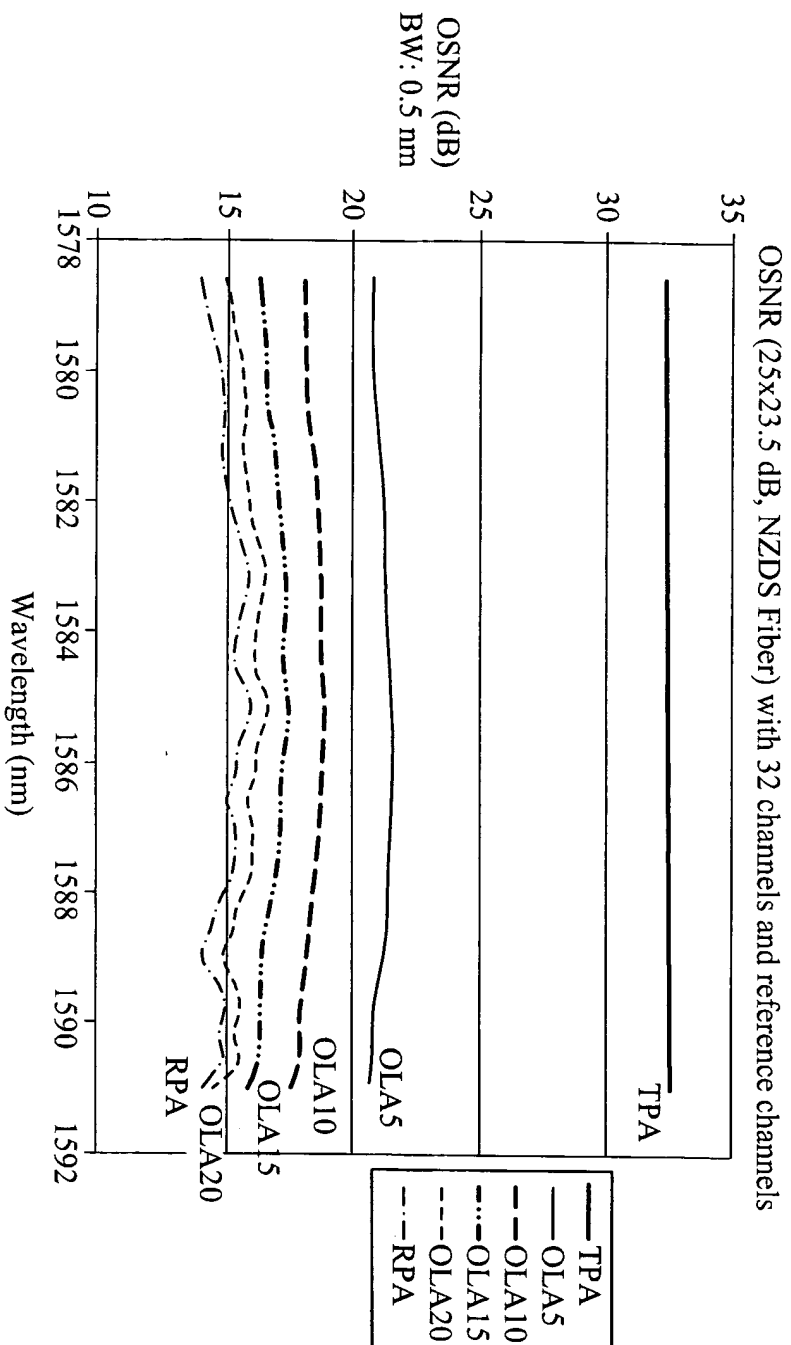


FIG. 36

Fig. 37: Spectrum (end of span 1) with tilted TPA and without tilt control

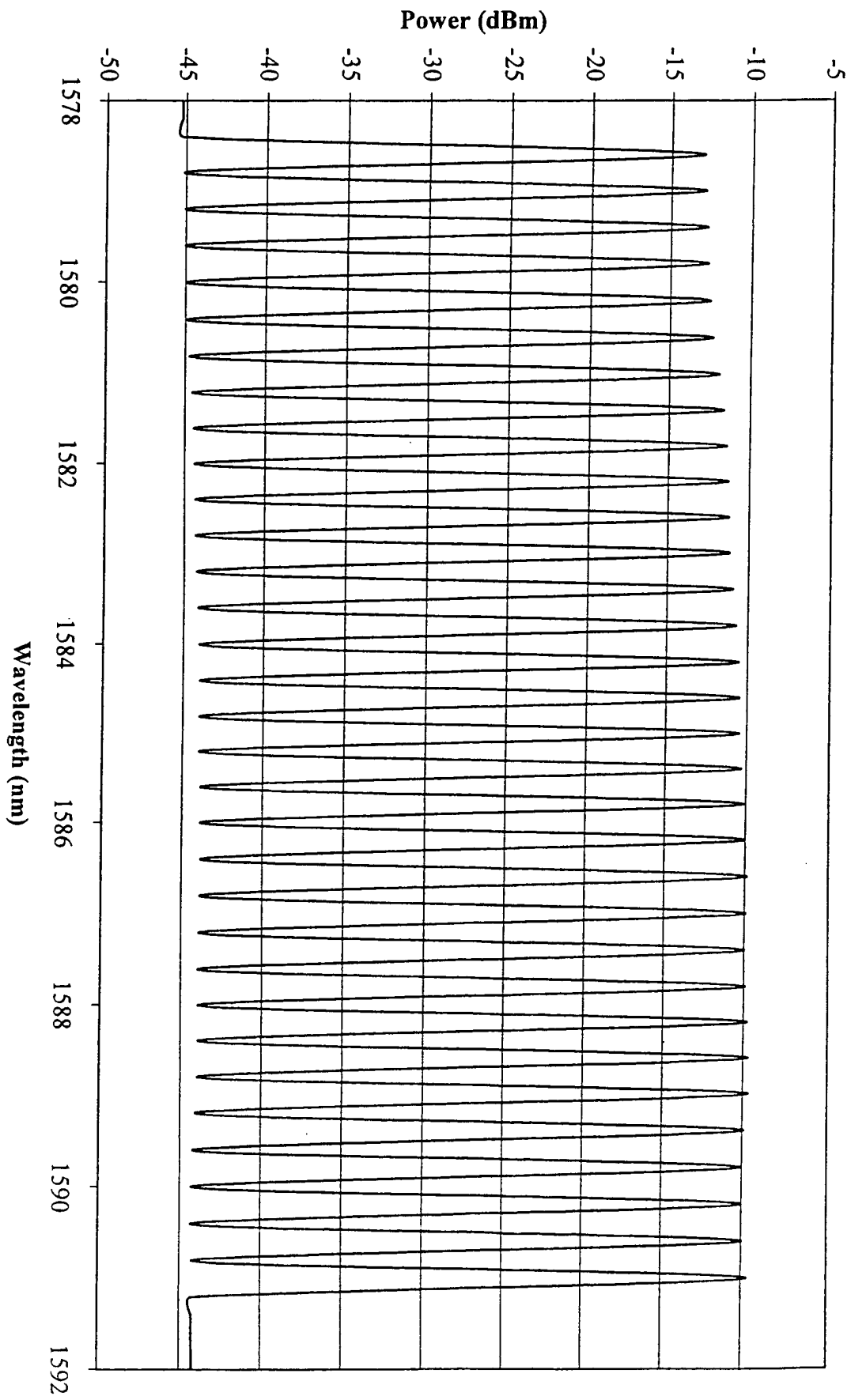
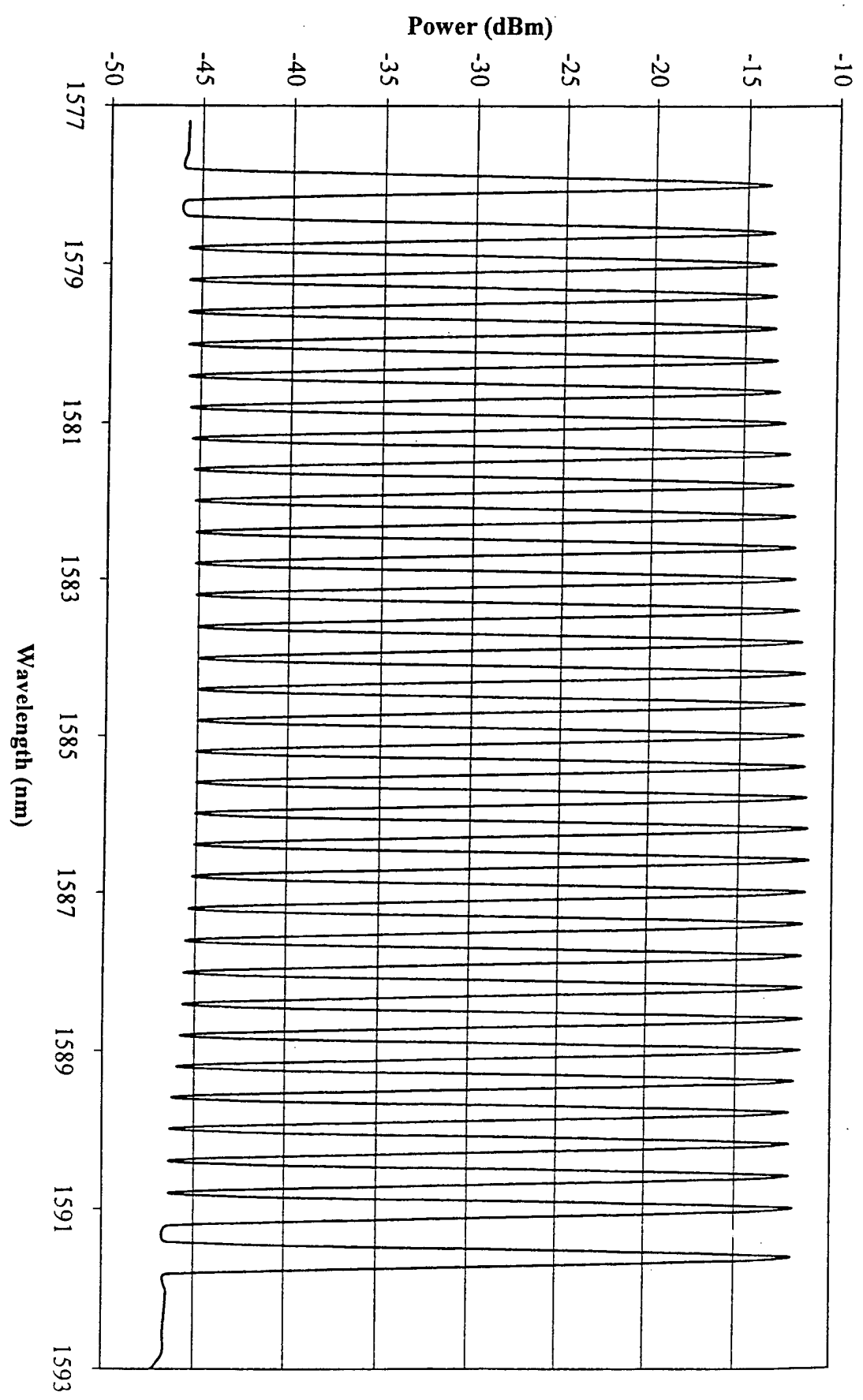


Fig. 38: Spectrum (end of span 1) with tilted TPA and tilt control



**Fig. 39: Gain Equalising Filter (every three spans)
with Bidirectional Raman Pumping**

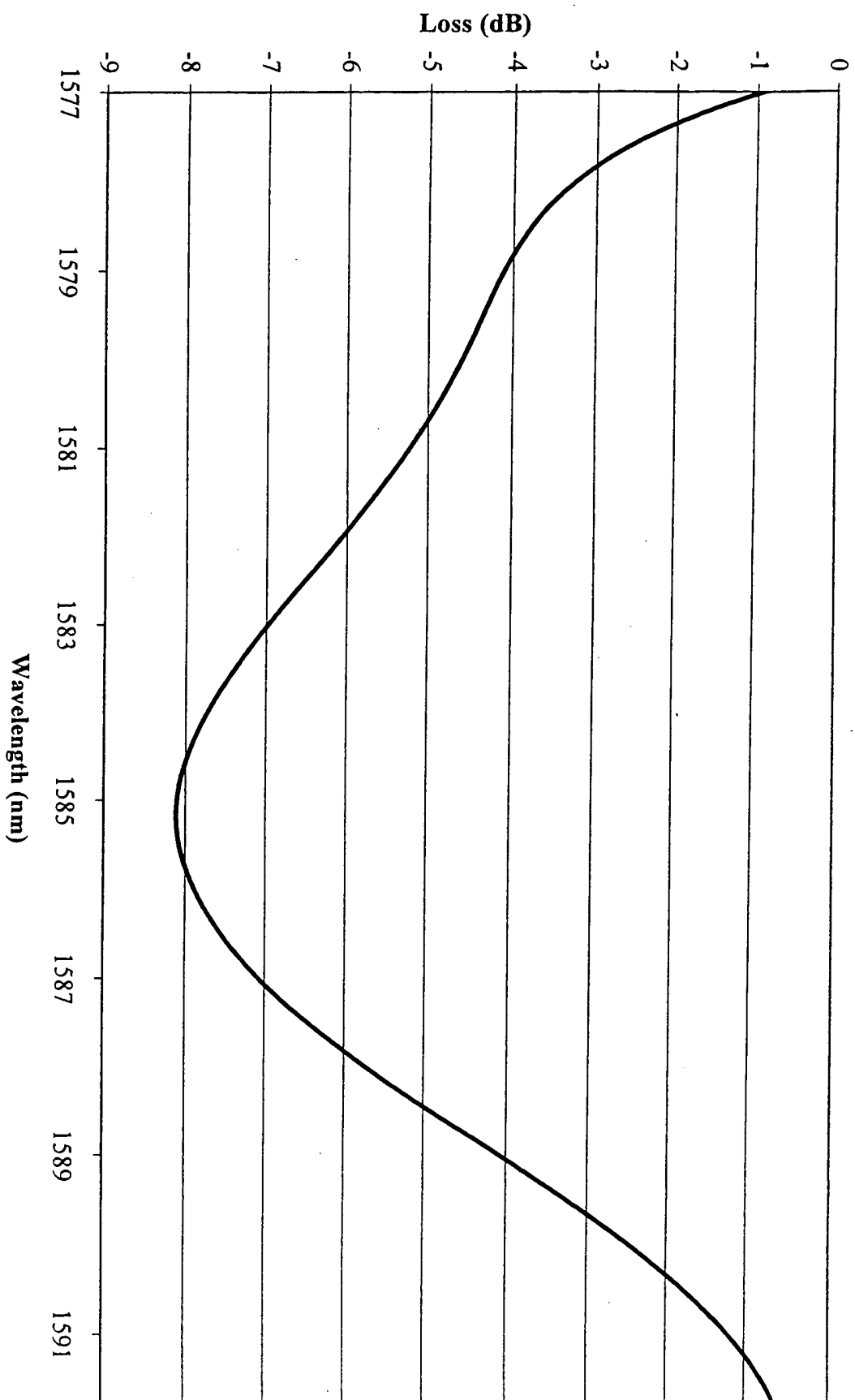


Fig. 40: Co-propagant Raman gain saturation

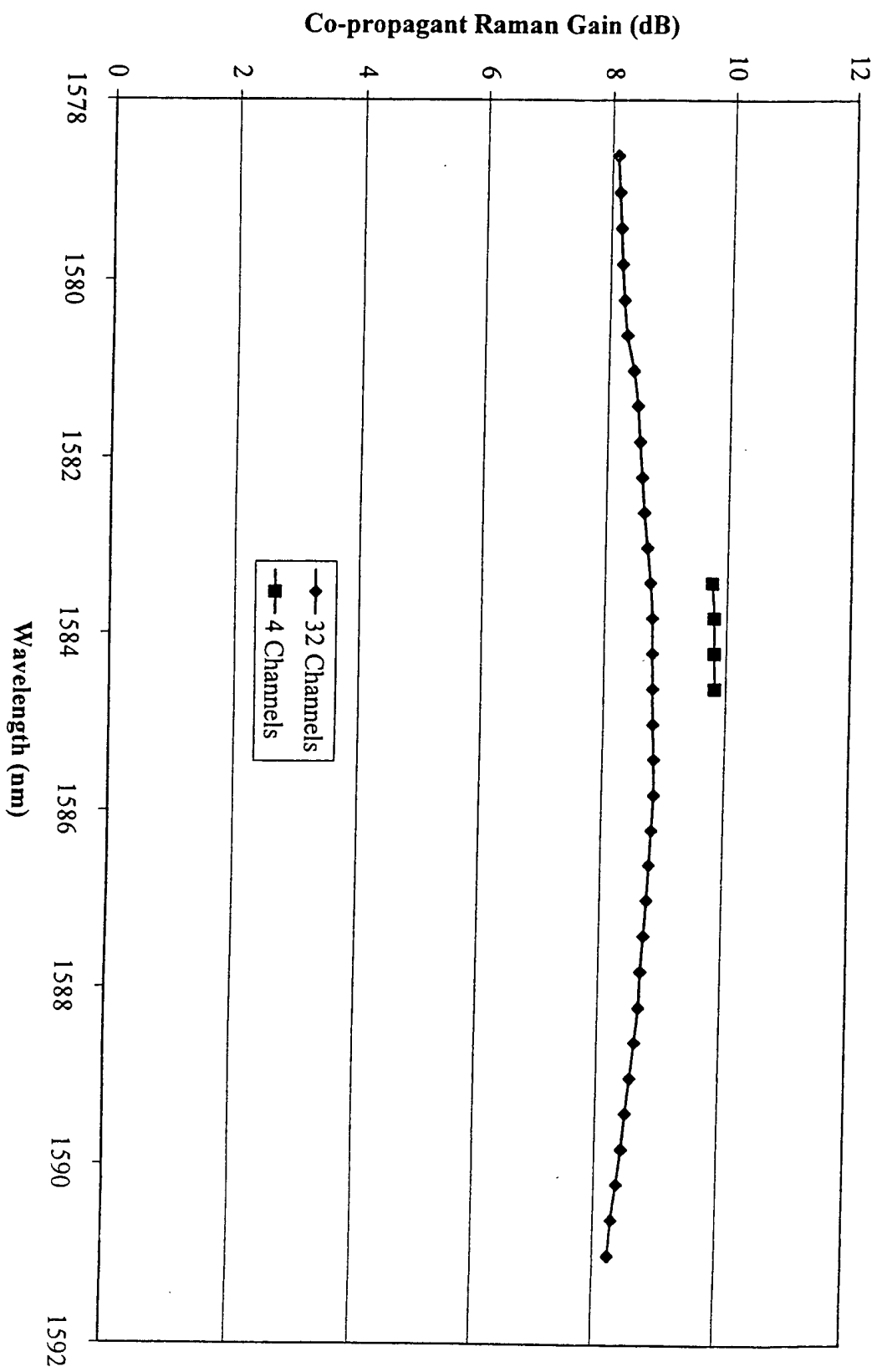
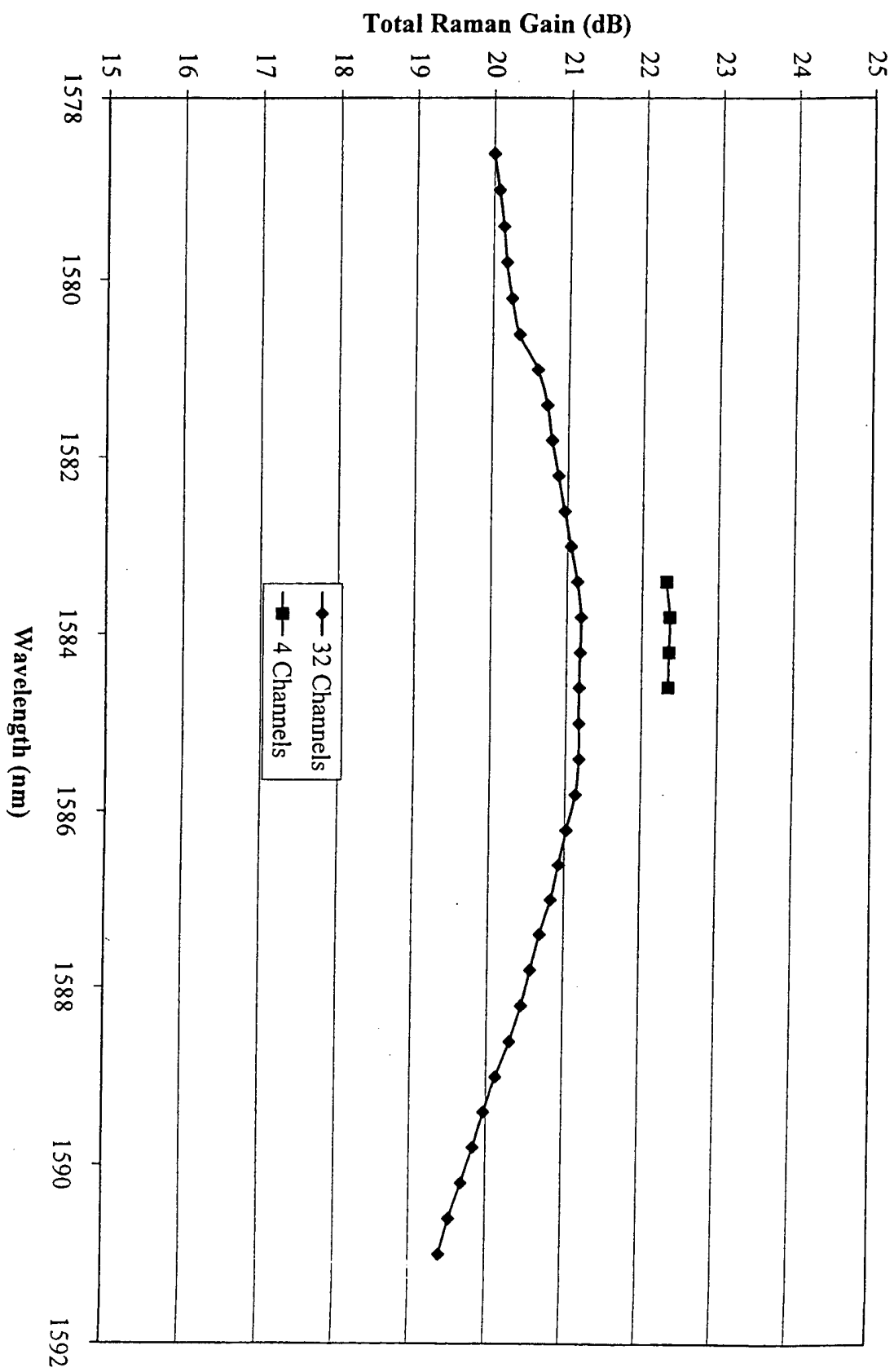


Fig. 41: Bi-directional raman gain saturation



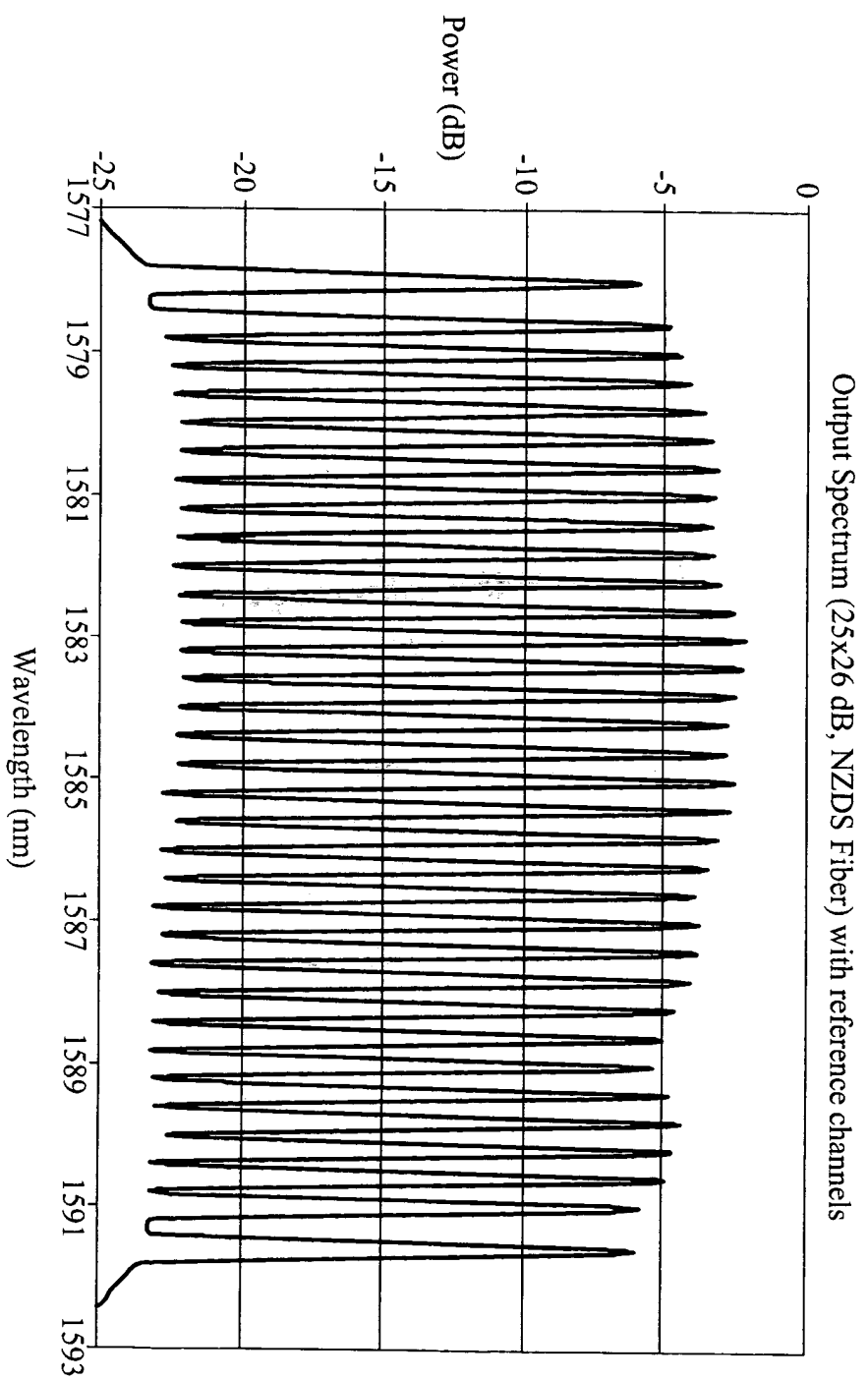


FIG. 42

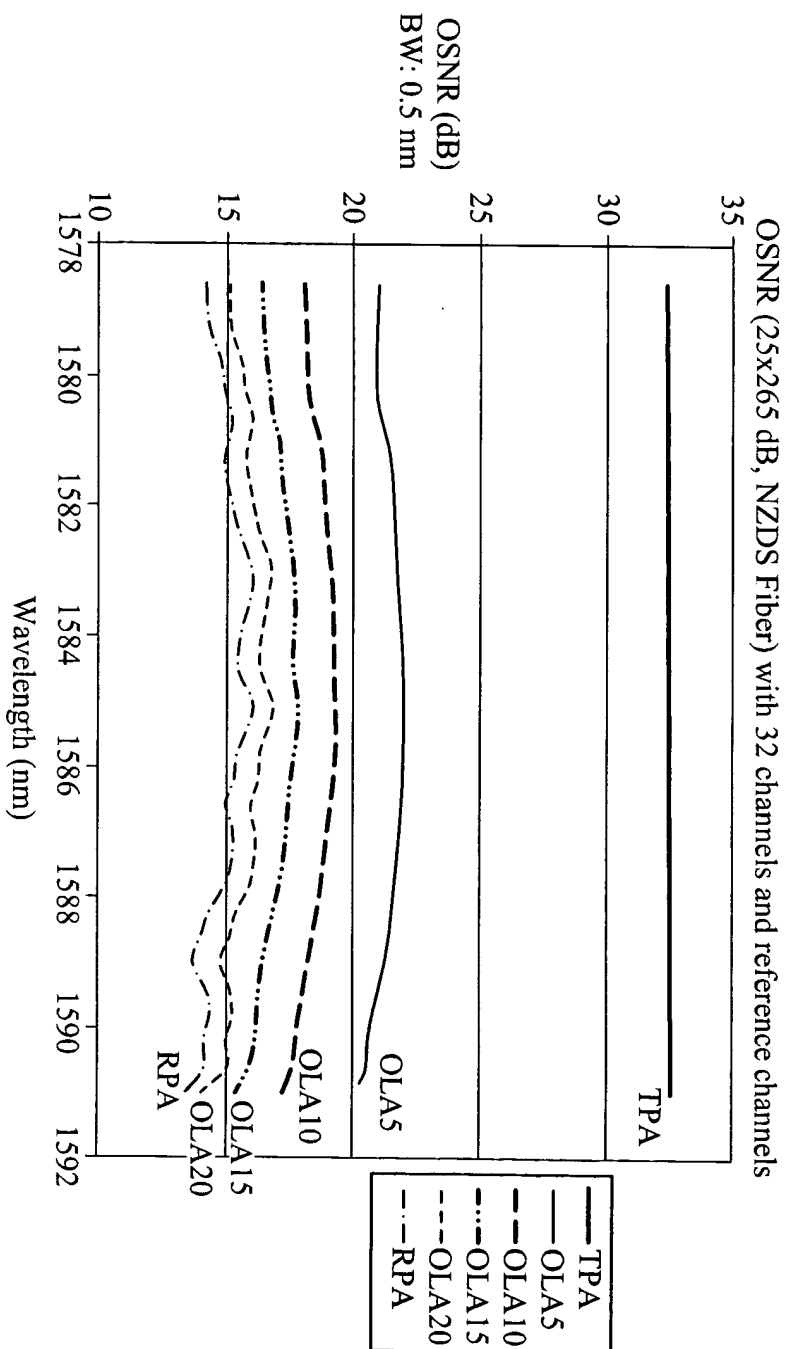


FIG. 43

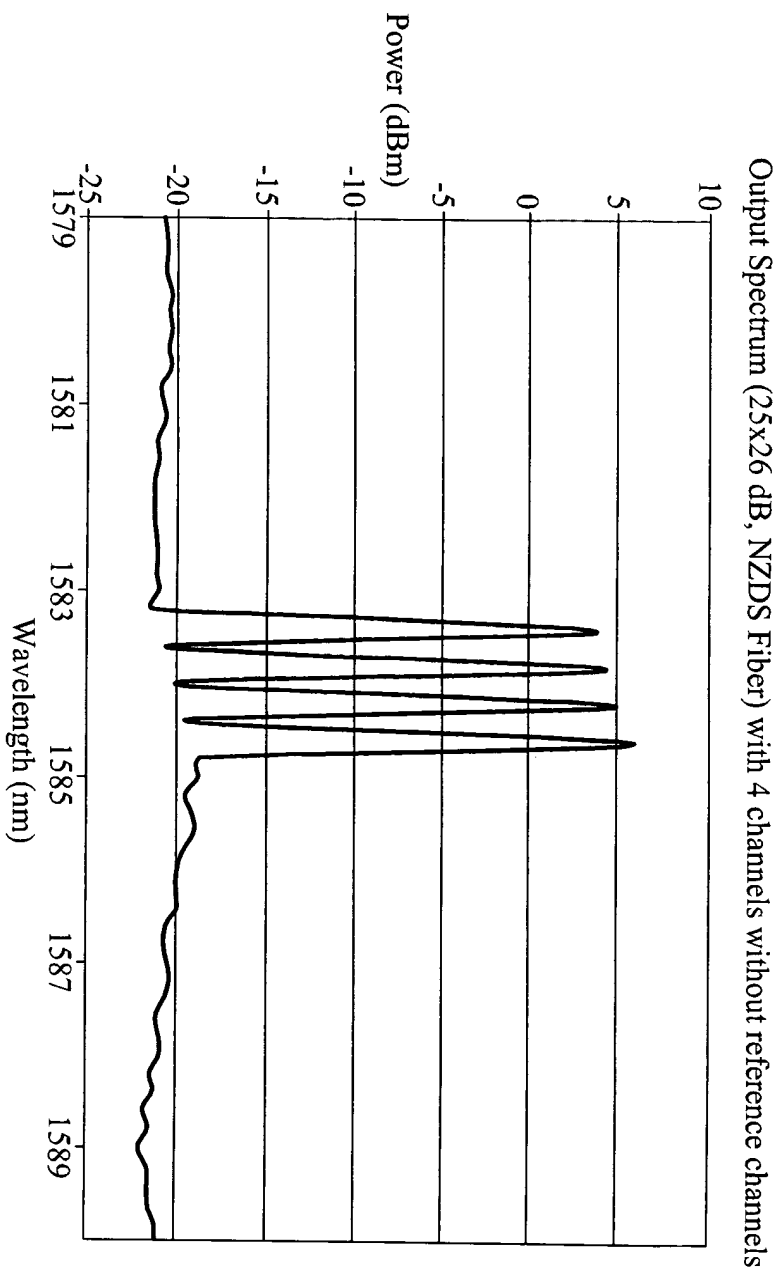


FIG. 44

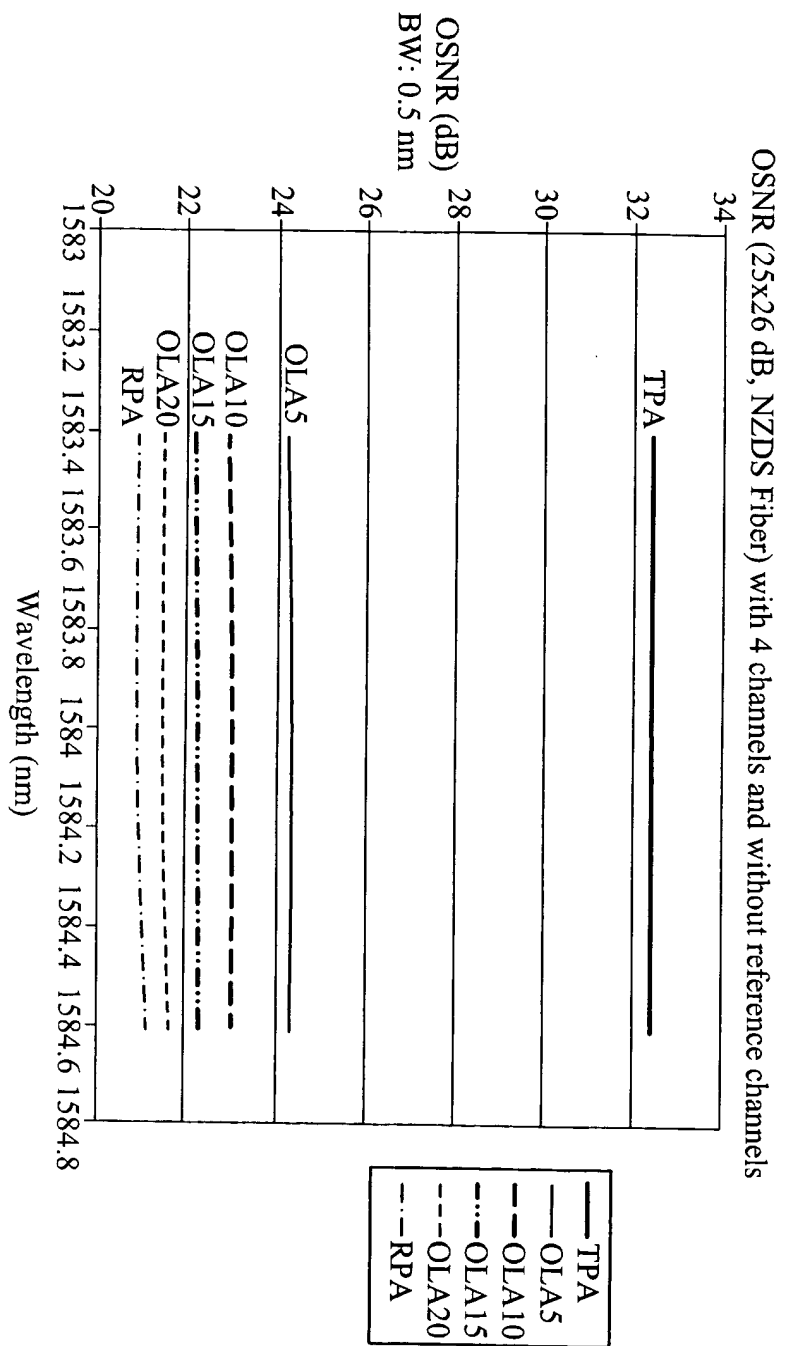


FIG. 45

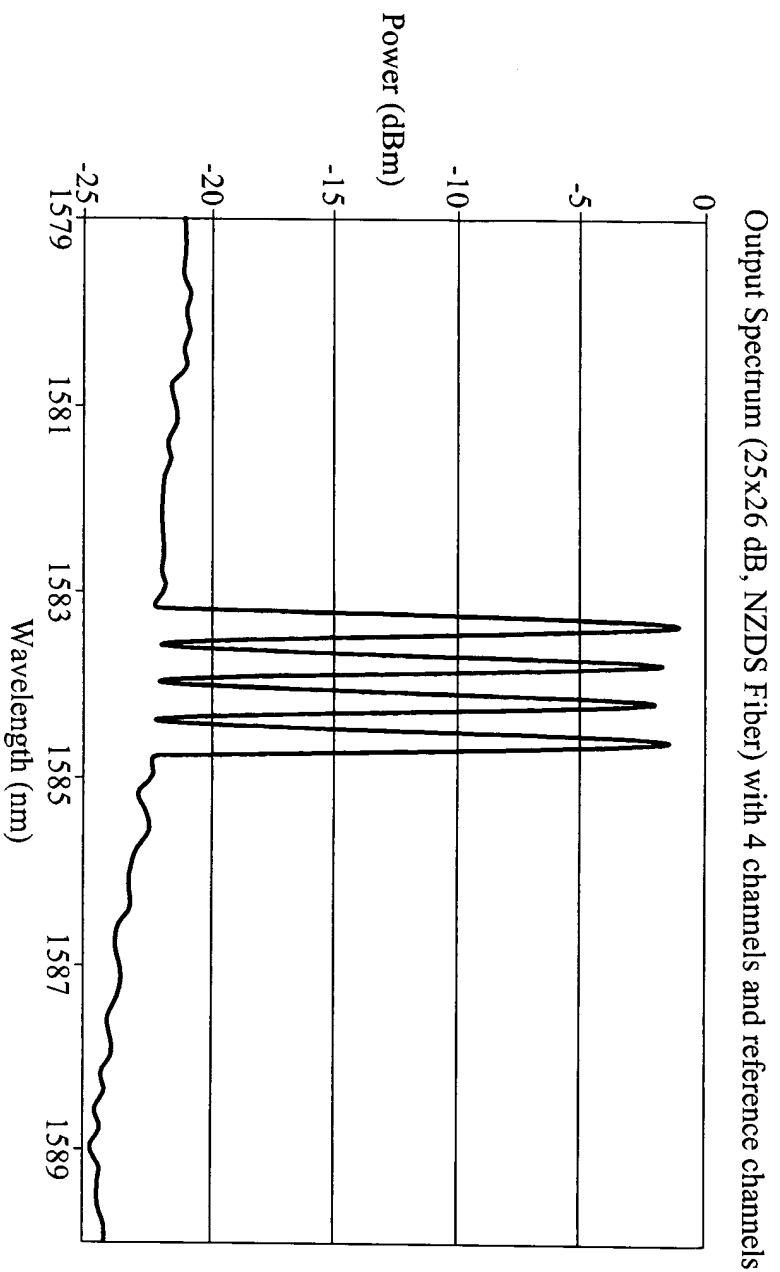


FIG. 46

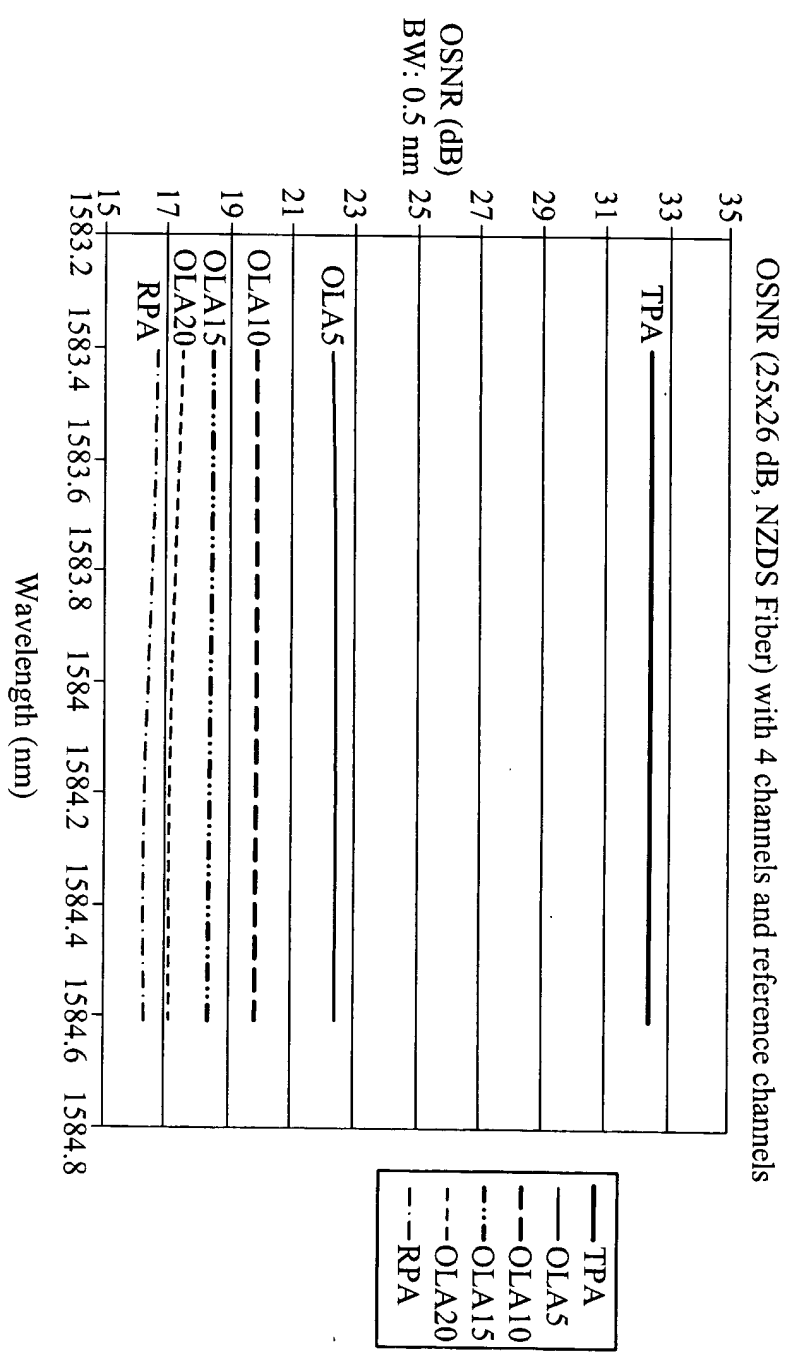


FIG. 47

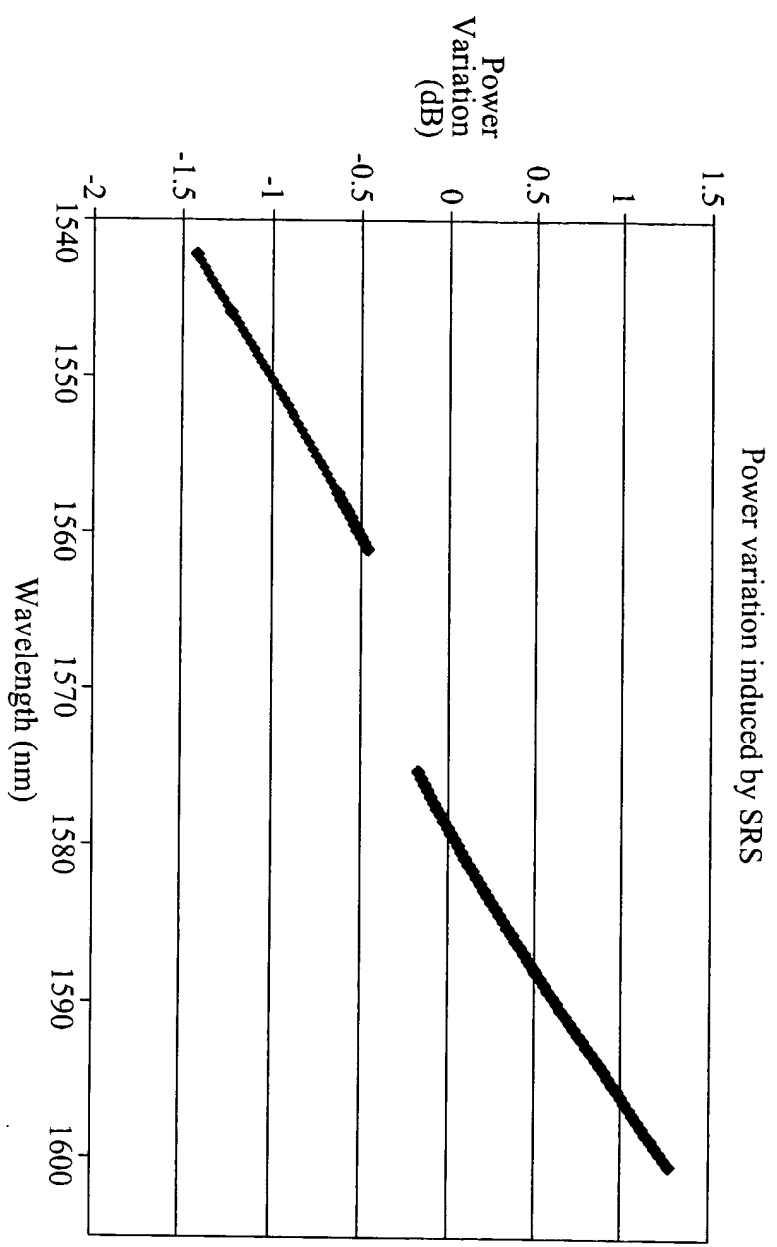


FIG. 48

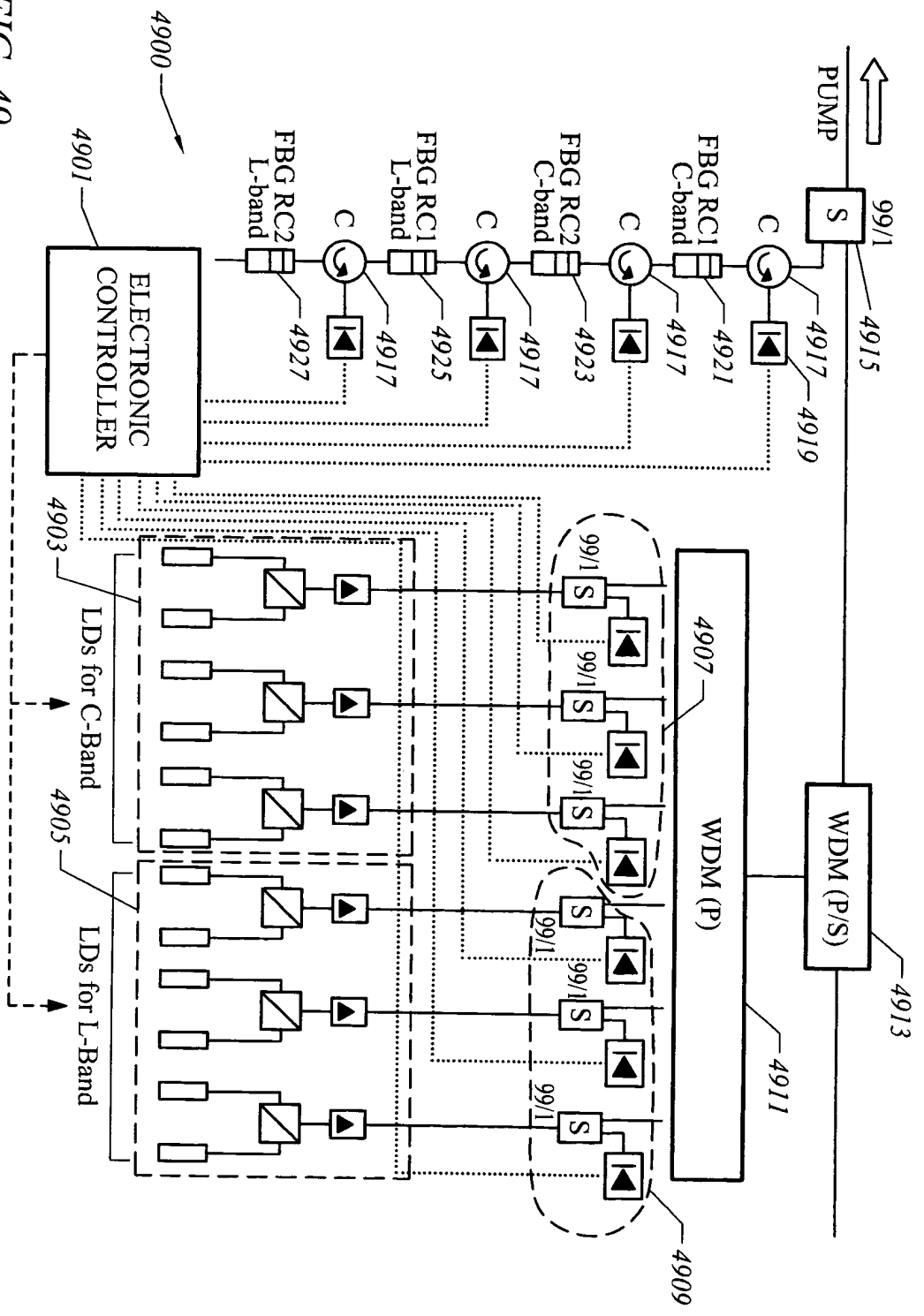


FIG. 49

Fig. 50: Raman Gain for dual-band and single band systems

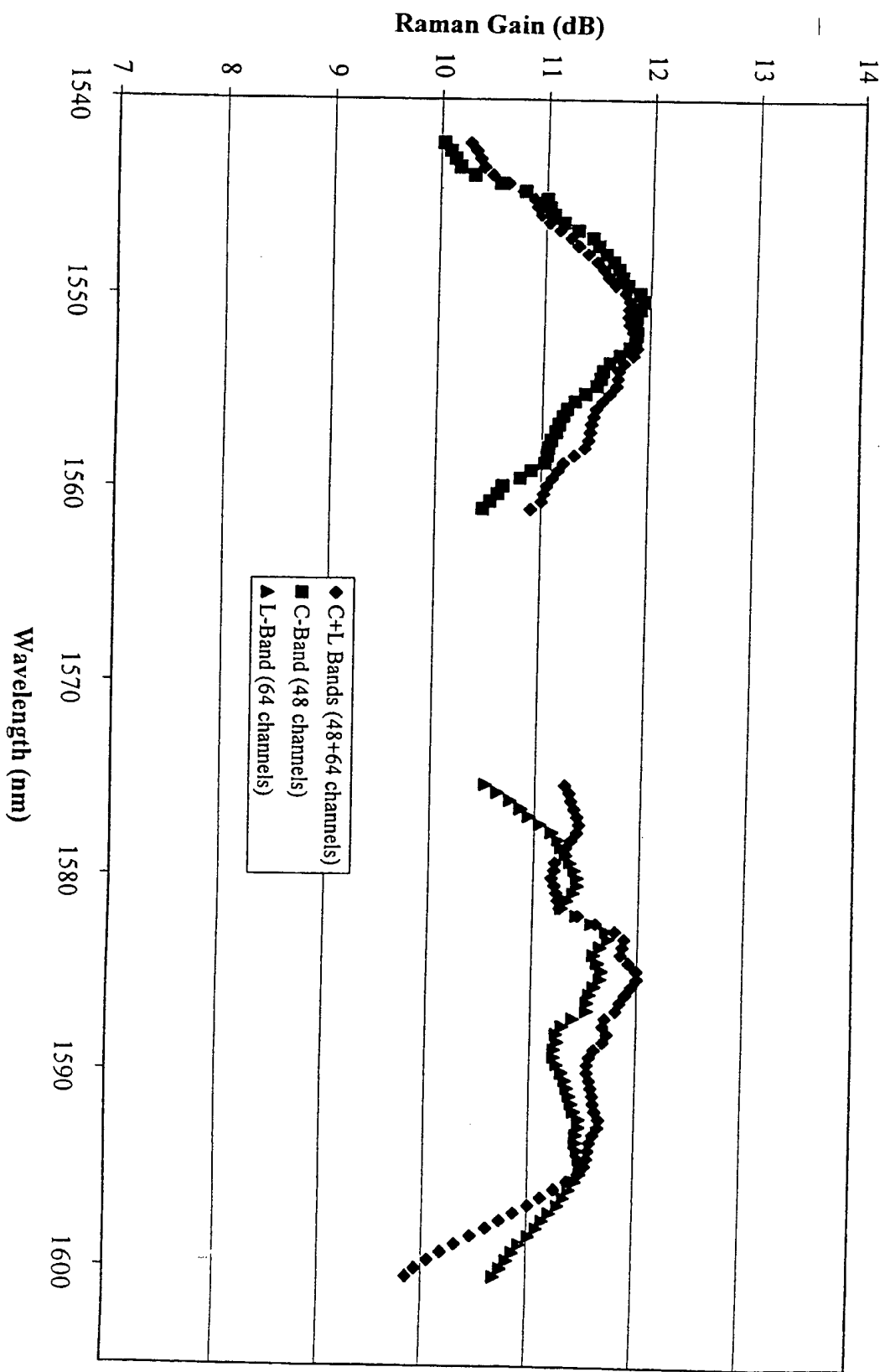


Fig. 51: Raman Gain for dual-band systems

